

Global Crops Market: Current Market and Outlook

Presentation to
The Rice Trader
Argentine America's COnference

April 14, 2013

By Dr. William W. Wilson
University Distinguished Professor
William.Wilson@ndsu.edu
701 231 7472



Dept of Agribusiness & Applied Economics
North Dakota State University
Fargo, USA

Topics

- Overall market developments and outlook
 - Corn, wheat and soybean outlook
- Summary

PRX FORECAST SUMMARY, MAJOR CROPS, NEW CROP YEAR

PRX_A1_Overview_Start_New, GTB-13-03, Mar-28-13

SUMMARY (PRX)

Drastic changes as

- Increase in corn area planted
- Slight increases in wheat plantings
- Increases in carry-out for corn, soybean and wheat

Stocks-use Ratio

- 2013 production estimate implies a stock/use ratio of about .18, up from .09 in 2012.

Item	Unit	US CORN		US SORGHUM		US SOYBEANS		US WHEAT	
		PRX 12-13	PRX 13-14	PRX 12-13	PRX 13-14	PRX 12-13	PRX 13-14	PRX 12-13	PRX 13-14
Carry-in	<i>mil bu</i>	989	959	23	29	169	146	743	690
Area planted	<i>thou ac</i>	97155	97282	6244	7620	77198	77126	55736	56440
Area harvested	<i>thou ac</i>	87375	89755	4955	6734	76104	75998	48991	49542
Yield	<i>bu/ac</i>	123.4	156.0	49.8	64.1	39.6	43.0	46.3	45.3
Production	<i>mil bu</i>	10780	14000	247	433	3015	3265	2269	2244
Imports	<i>mil bu</i>	125	25	0	0	0	0	130	100
Supply	<i>mil bu</i>	11894	14984	270	462	3203	3426	3142	3034
Feed/Residual Use	<i>mil bu</i>	4250	4950	87	90	83	151	451	250
Industrial Use	<i>mil bu</i>	5860	6247	94	97	1605	1675	951	950
of which, fuel ethanol	<i>mil bu</i> <i>mil gals</i>	4450 12357	4827 13477	81 218	89 241				
Total Domestic Use	<i>mil bu</i>	10110	11197	181	187	1688	1826	1402	1200
Foreign Exports	<i>mil bu</i>	825	1500	60	151	1369	1300	1050	1073
Total Use	<i>mil bu</i>	10935	12697	241	338	3057	3126	2452	2273
Carry-out	<i>mil bu</i>	959	2287	29	124	146	300	690	762
US Farm Price	<i>cts/bu</i>	720	510	700	500	1430	1290	790	675

PRX supply-demand factors are based on independent analysis, and will frequently be different than USDA's.

IGC World Grain Wheat

March 2013

- World production decreased in 2012/13 but, is expected to increase in 2013/14
 - Global stocks to increase by 5 mmt to 182 mmt
- Major changes in production in 2013/14:
- Increases in EU, Russia, Ukraine, Canada, Australia, and S. America
 - Decreases are projected for US production
 - Important features:
 - Increase in wheat feeding due to high corn prices
 - Escalation in low cost exports by India
 - On/off trade restrictions insinuated by FSU

Wheat: Supply and demand summary

	10/11	11/12	12/13	13/14
		(est.)	(f'cast)	(proj.)
Opening stocks	199	193	197	177
Production	653	696	656	683
Total supply	852	889	853	860
Total use	659	692	676	678
of which: <i>Feed</i>	119	146	131	127
<i>Industrial</i>	19	19	19	20
<i>Food</i>	457	461	465	469
Closing stocks	193	197	177	182
Trade ^{a)}	126	145	138	138

a) Jul/Jun

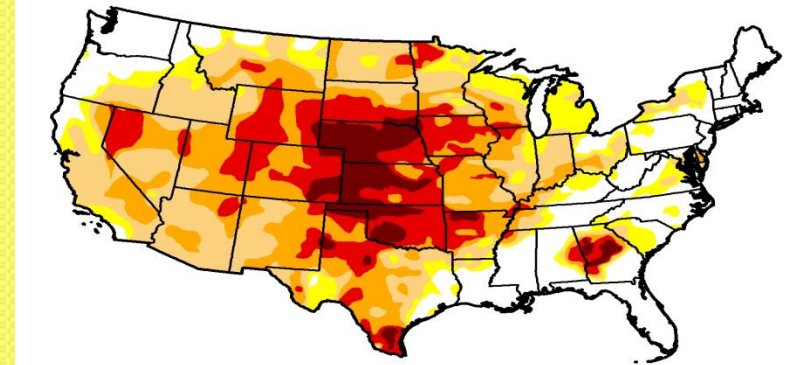
DROUGHT 2012

Drought conditions have improved vs... 2012.

2012 was the worst U.S. drought in more than 50 years and caused more damage than expected to corn and soybean crops

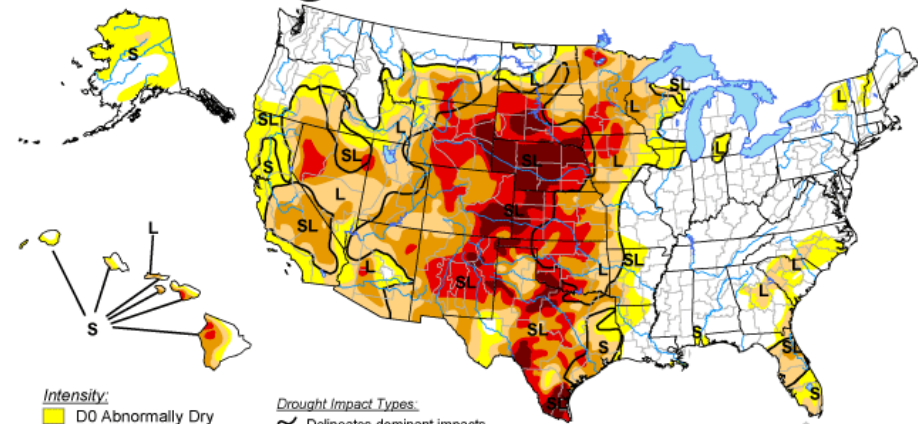
- Sept 2012 vs... current:
 - Improvements in NW N. Dakota
 - Slight improvements in KS
- Conditions for 2013 have improved, and are continuing to improve with more snowfall throughout much of the HRW area, esp Kansas.
- Problem areas persist in Texas, ...

- Comparable drought measures: Sept 2012 (top) vs... Mar 28 2013



U.S. Drought Monitor

March 26, 2013
Valid 7 a.m. EDT



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Drought Impact Types:

- ~ Delineates dominant impacts
- S = Short-Term, typically <6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically >6 months (e.g. hydrology, ecology)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu/>



Released Thursday, March 28, 2013
Author: Anthony Artusa, NOAA/NWS/NCEP/CPC

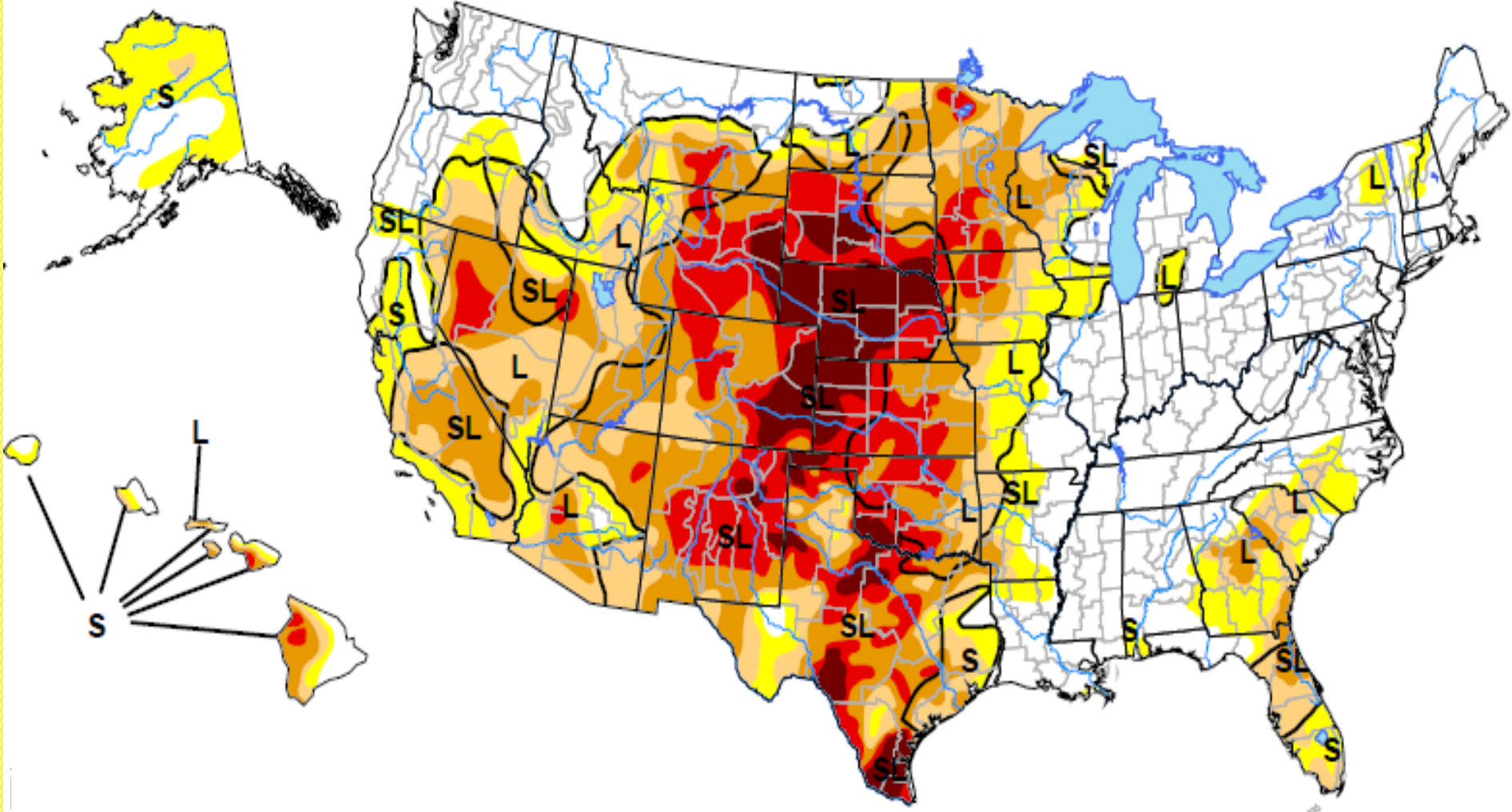
Drought Chronology

- Figures below show a chronological representation of the drought and drought forecast as of mid-March 2013

U.S. Drought Monitor

March 19, 2013

Valid 7 a.m. EDT

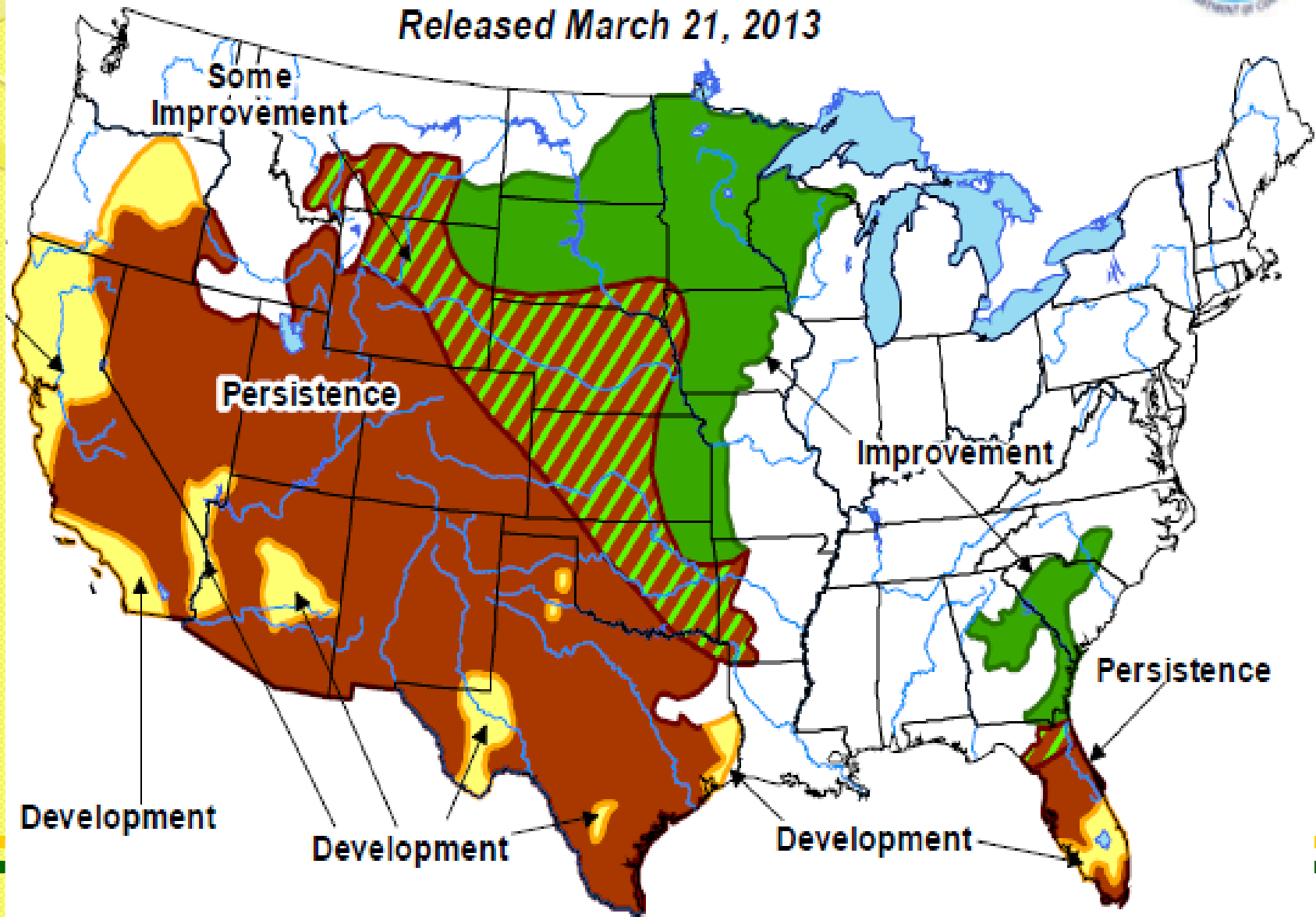


U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for March 21 - June 30, 2013

Released March 21, 2013



Current Concerns:

- Dry subsoil
- Blizzards/snow causing late plantings
 - Saskatchewan **will experience the latest snow melt in the past 65 years and likely in a hundred years or more.**
 - **Planting normally starts in early May with May 20th being well within the acceptable range.**
- Effects:
 - Switch away from corn to soybeans (likely)
 - Make corn growing season more vulnerable



CORN: STOCKS/USE RATIO

2012/13 US and World stock-use will decline.

- Low stock/use ratios are inversely related to price levels

2013/14, it is expected this will increase to .18

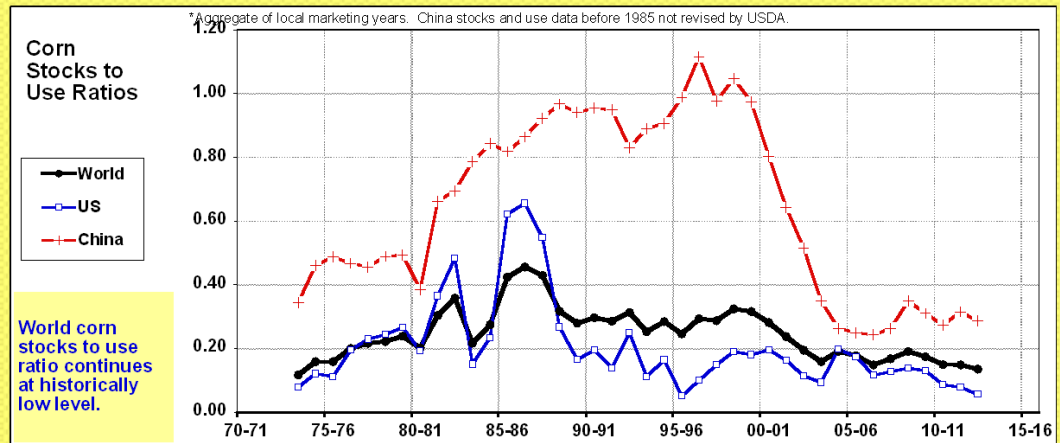
Less than perfect planting/growing conditions

Reduce yield 10b/a and area planted 5%: St/Use < in 2013 than 2012

WORLD CORN SUPPLY-DEMAND (USDA WASDE)

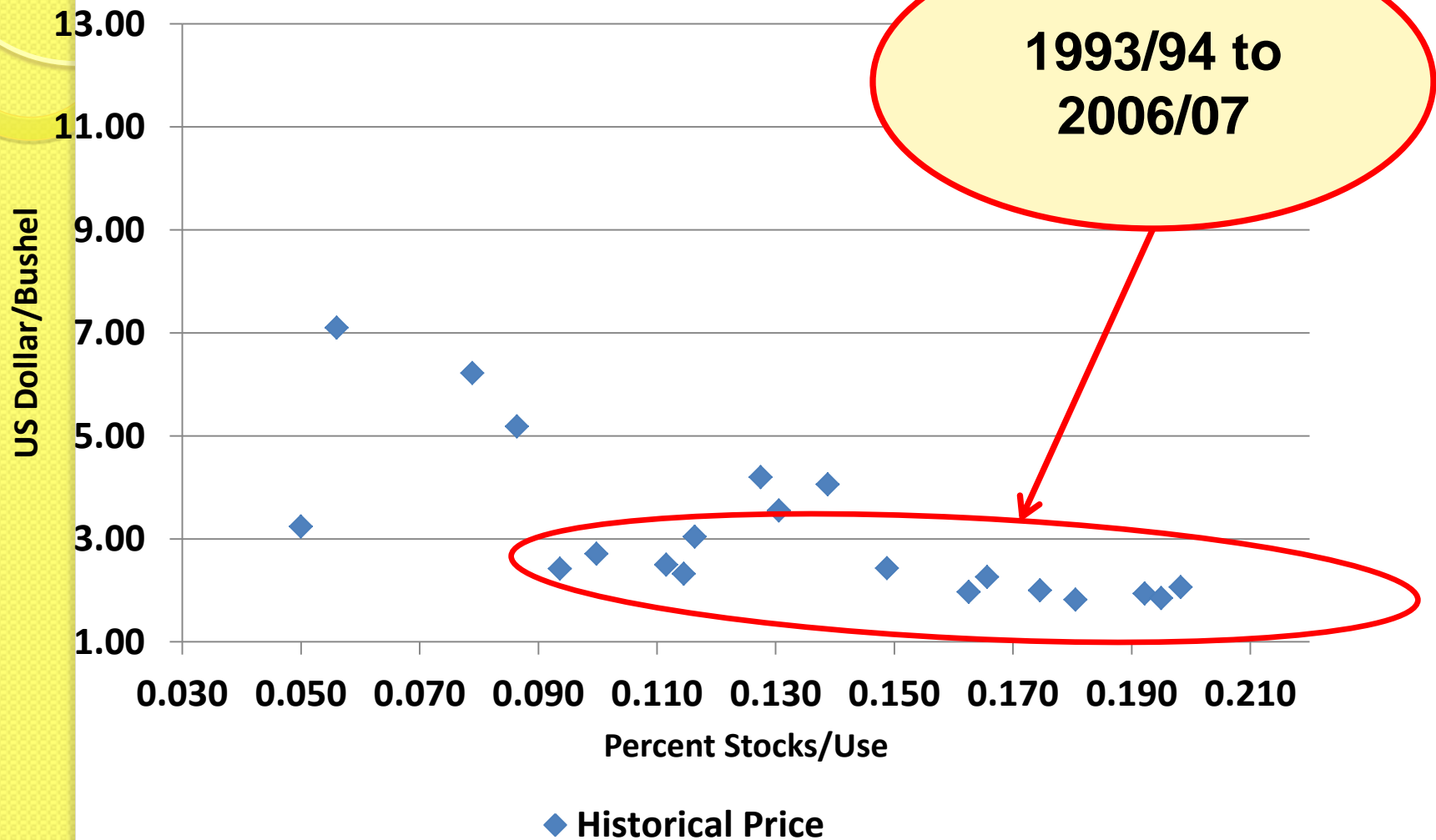
PRX_A1_Overview_Start_New, GTB-13-03, Mar-28-13

Crop Year*	Beg. Stocks	Pro-duction	Im-ports	Sup-ply	Ex-ports	Feed Use	Food & Ind. Use	Total Use	End Stocks	Stocks to Use
	mmt	mmt	mmt	mmt	mmt	mmt	mmt	mmt	mmt	ratio
09-10	148	819	90	967	97	489	237	823	144	0.18
10-11	146	832	92	978	91	502	257	850	128	0.15
11-12	128	883	99	1011	117	505	258	880	131	0.15
12-13	131	854	96	985	88	523	257	868	117	0.14
Change from previous year										
	3	-29	-3	-26	-29	18	-1	-12	-14	-0.01
		-3.2%	-3.5%		-24.8%			-1.3%	-10.4%	



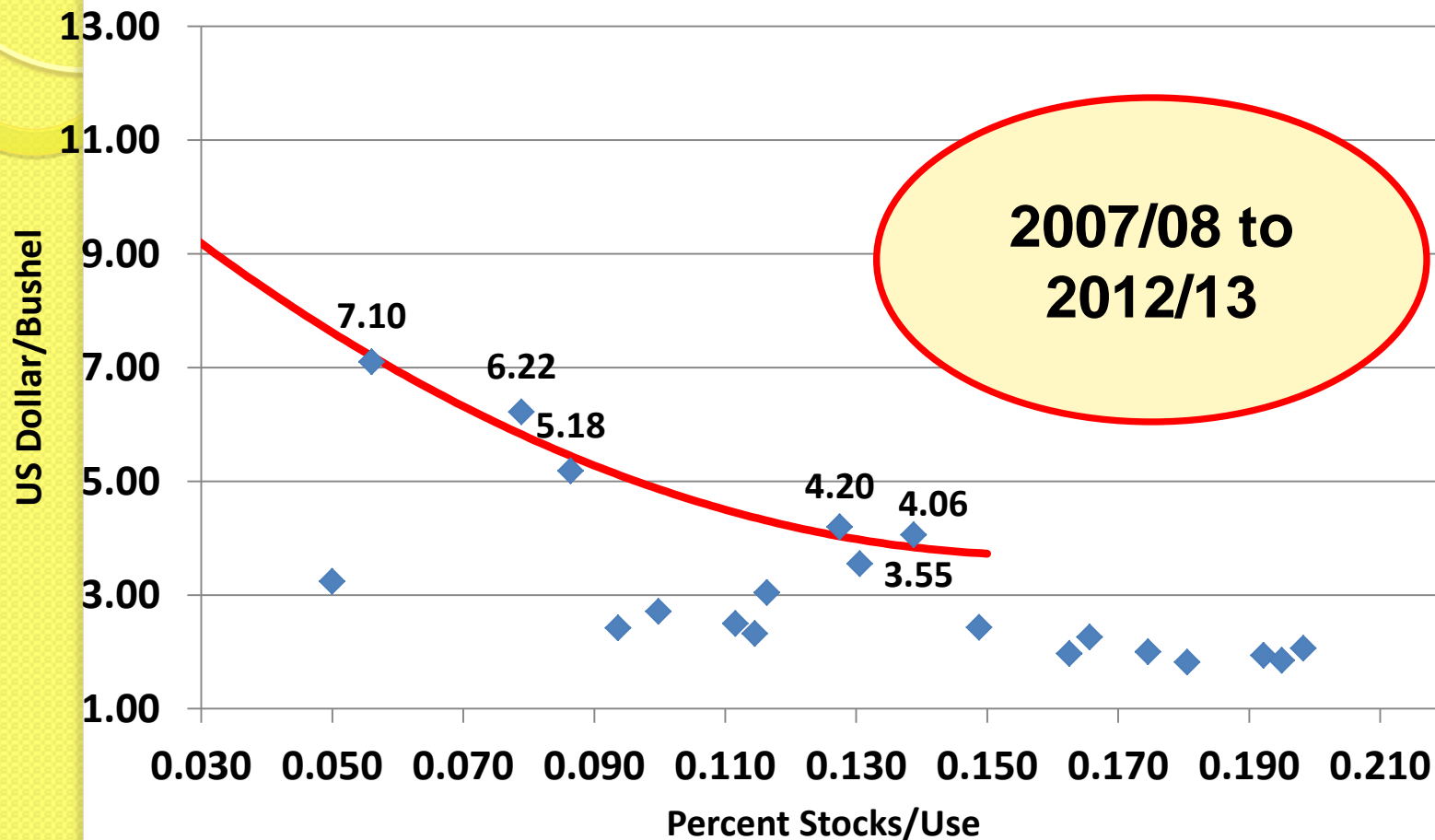
Corn Price vs.. Stocks/Use Ratio

1993/94 to 2012/13



Corn Price vs.. Stocks/Use Ratio

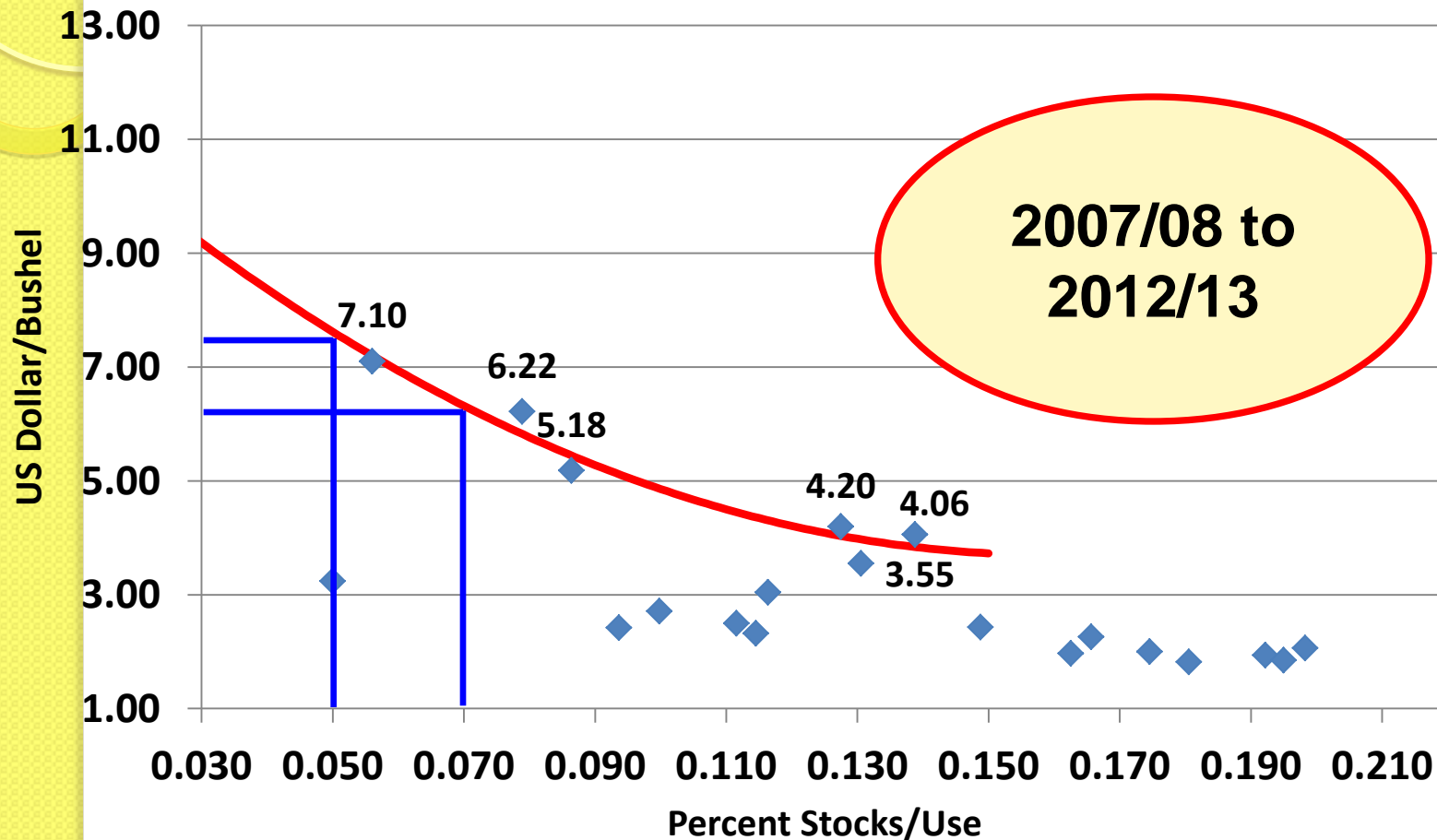
1993/94 to 2012/13



◆ Historical Price — Forecasted Price

Corn Price vs.. Stocks/Use Ratio

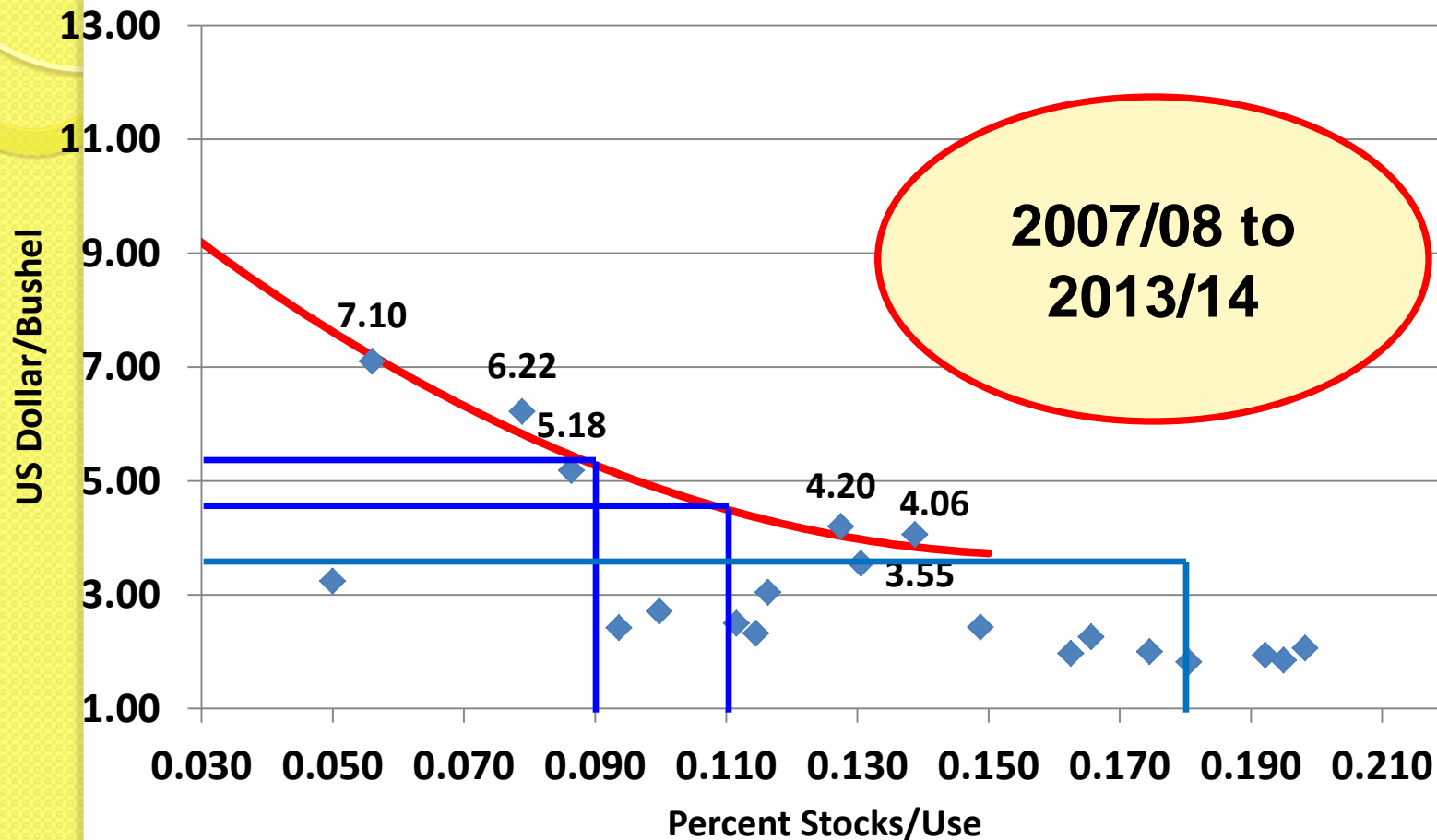
1993/94 to 2012/13



◆ Historical Price — Forecasted Price

Corn Price vs.. Stocks/Use Ratio

1993/94 to 2012/13



◆ Historical Price — Forecasted Price

MARKET BEHAVIOR: CORN (UPPER) AND WHEAT (LOWER)

ZC Z3 [10] - CORN

LAST: 539'6

CHANGE: ▼ 3'2

HIGH: 543'2

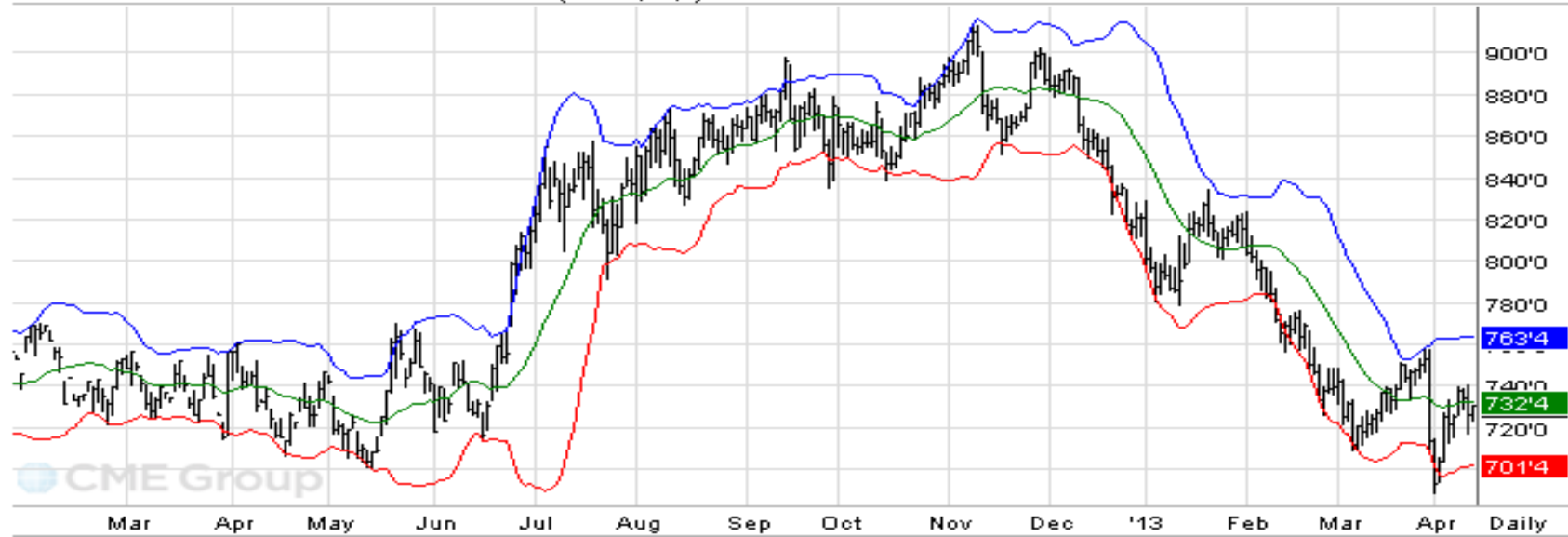
LOW: 538'4

4/11/2013

BOLL (ZC Z3,20,2) Hi = 581'0 MA = 552'0 Lo = 523'0



BOLL (ZW Z3,20,2) Hi = 763'4 MA = 732'4 Lo = 701'4



Corn Price Forecasts (April 2013)

<HELP> for explanation.
 <Menu> to Return

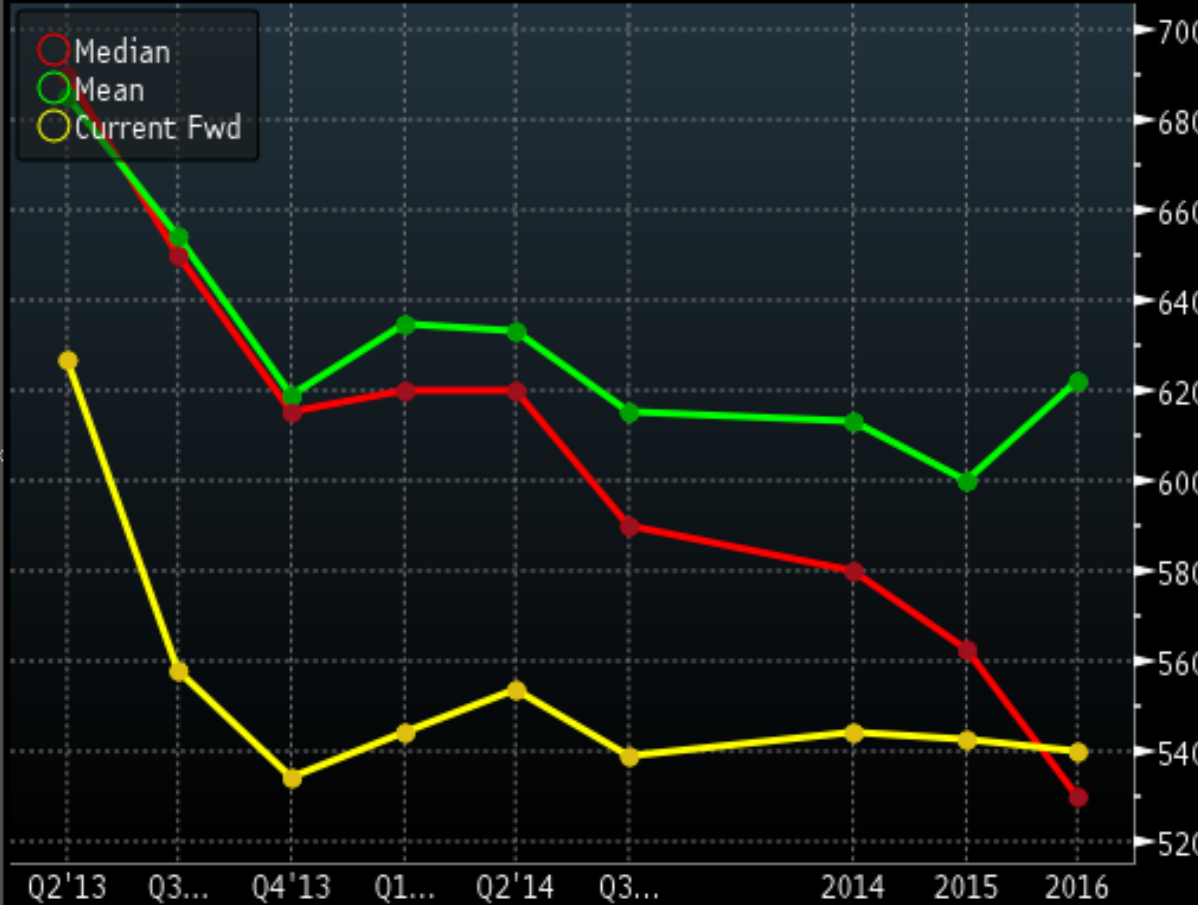
Commodity Price Forecast

Summary

- Median
- Mean
- High
- Low
- Current Fwd

Analysts

- D. Corsini
- R. Deverell
- A. Doshi
- A. Herlinghaus
- E. Jayet
- J. Kong
- C. McGlone-Hahn
- C. Narayanan
- A. Ofon
- C. Paraskevas
- T. Pugh
- J. Schenker
- G. Scheppler
- D. Snowdon
- C. Tuxen



Wheat Forecasts

<HELP> for explanation.
<Menu> to Return

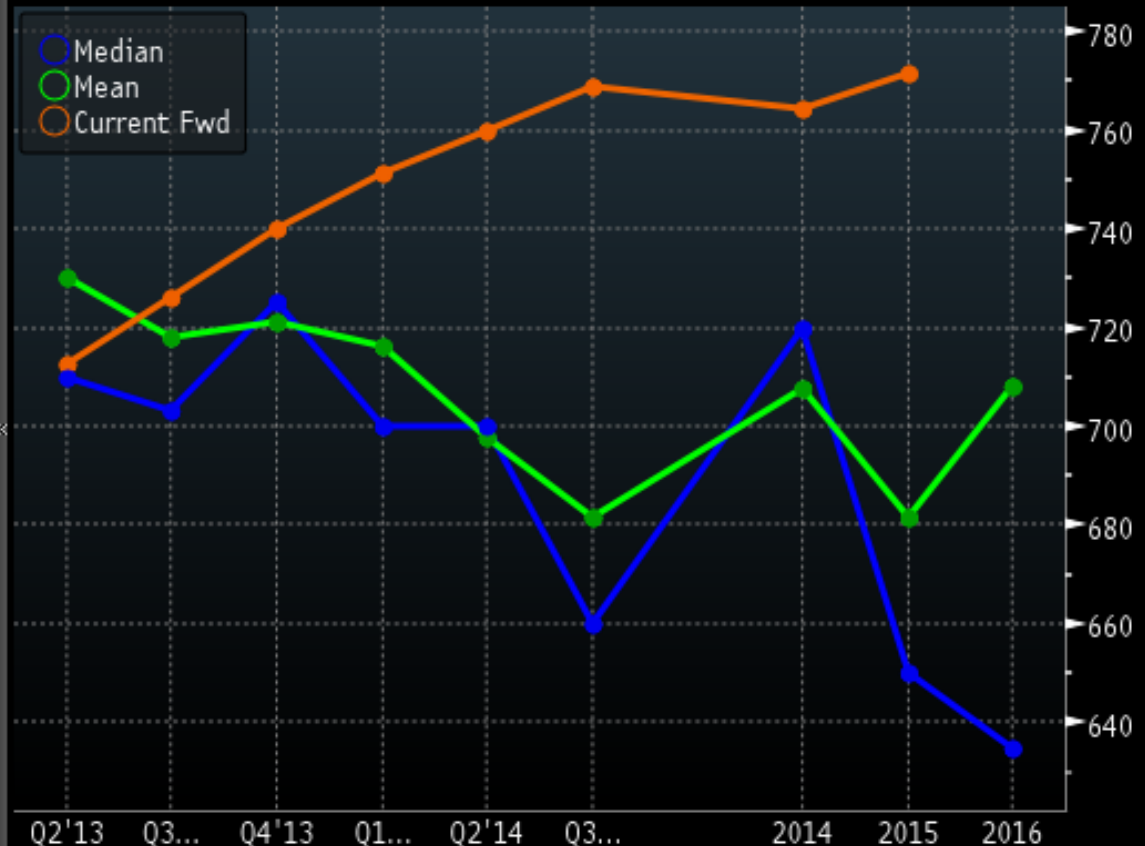
Commodity Price Forecast

Summary

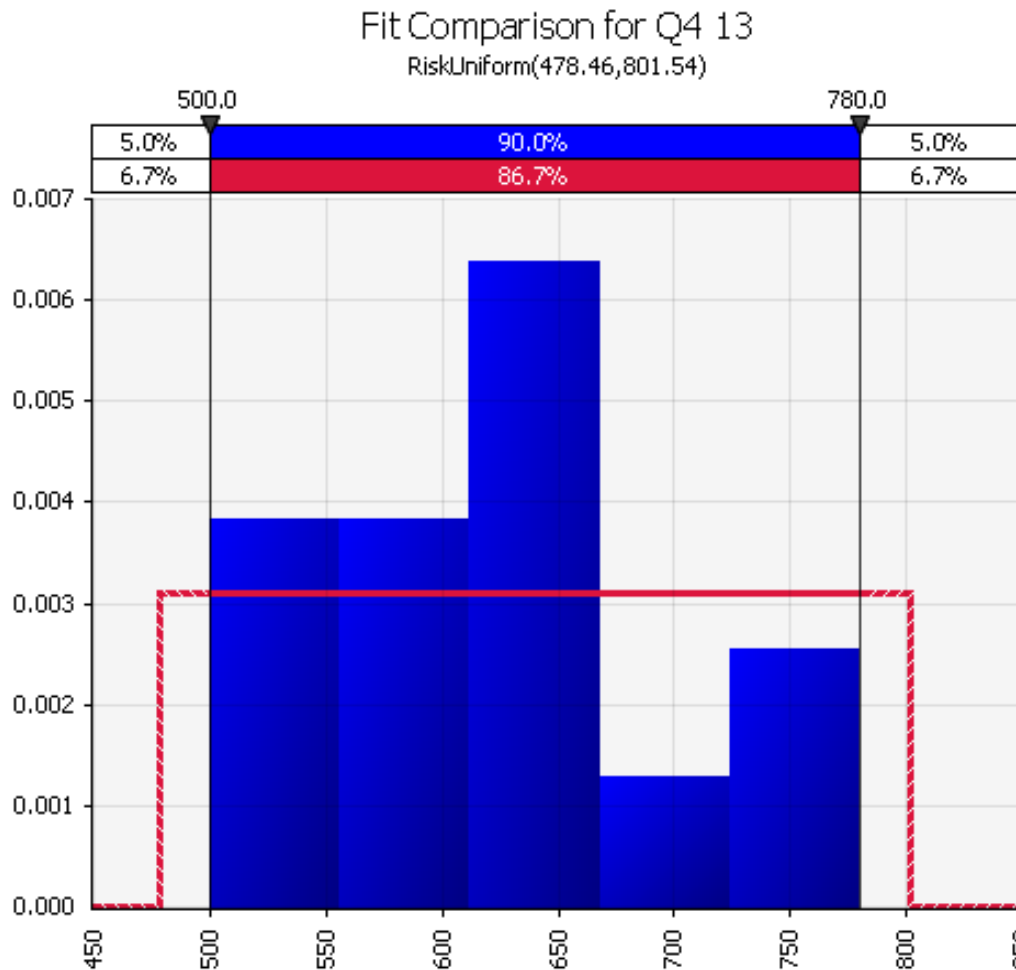
- Median
- Mean
- High
- Low
- Current Fwd

Analysts

- D. Corsini
- R. Deverell
- A. Doshi
- A. Herlinghaus
- E. Jayet
- C. McGlone-Hahn
- C. Narayanan
- A. Ofon
- C. Paraskevas
- T. Pugh
- J. Schenker
- G. Scheppler
- J. Smirk
- D. Snowdon
- C. Tuxen

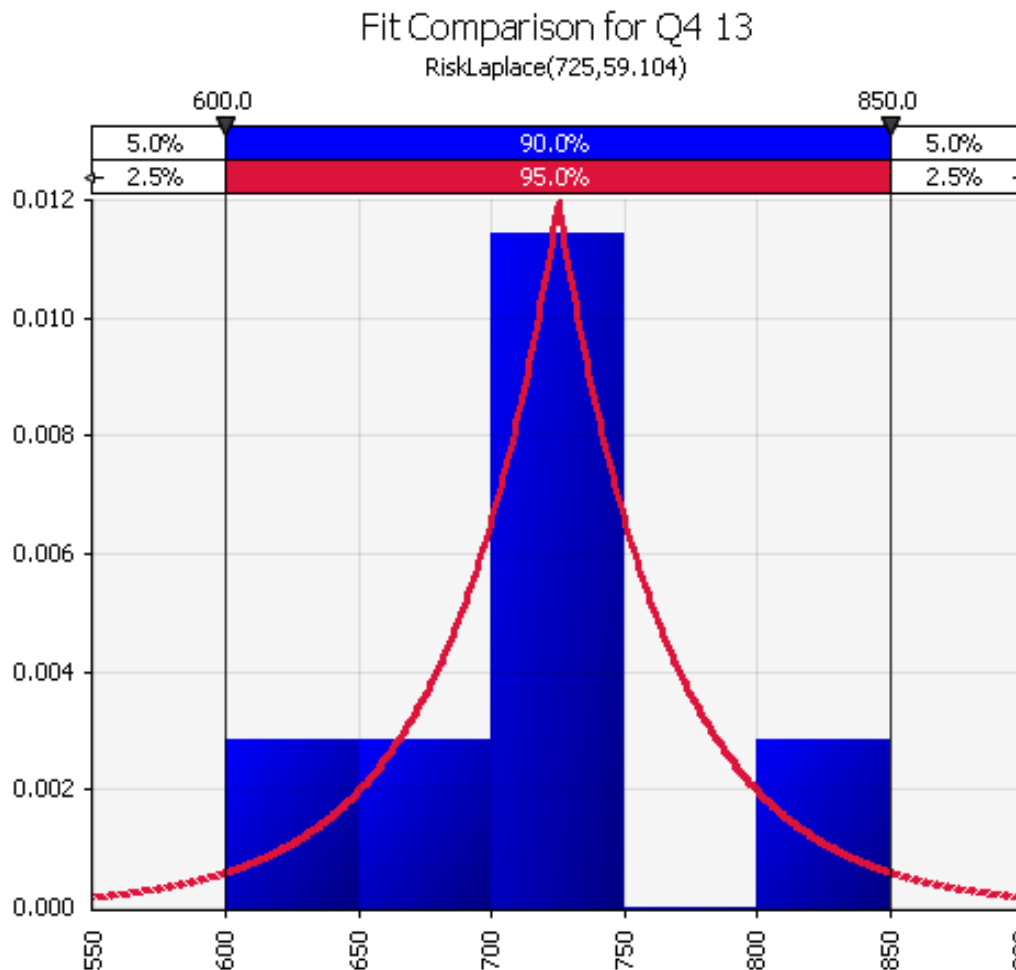


Distribution of Corn Forecast Estimates for Q4 2013



Statistics		
	Input	Uniform
Minimum	500.00	478.46
Maximum	780.00	801.54
Mean	621.12	640.00
Mode	≈505.00	N/A
Median	615.00	640.00
Std Dev	85.94	93.27
Skewness	0.3728	0.0000
Kurtosis	2.8775	1.8000
Left X	500.0	500.0
Left P	5.0%	6.7%
Right X	780.0	780.0
Right P	95.0%	93.3%
Dif. X	280.00	280.00
Dif. P	90.0%	86.7%
1%	500.00	481.69
5%	500.00	494.61
10%	500.00	510.77
15%	515.00	526.92
20%	515.00	543.08
25%	585.00	559.23
30%	600.00	575.38
35%	600.00	591.54
40%	600.00	607.69
45%	615.00	623.85

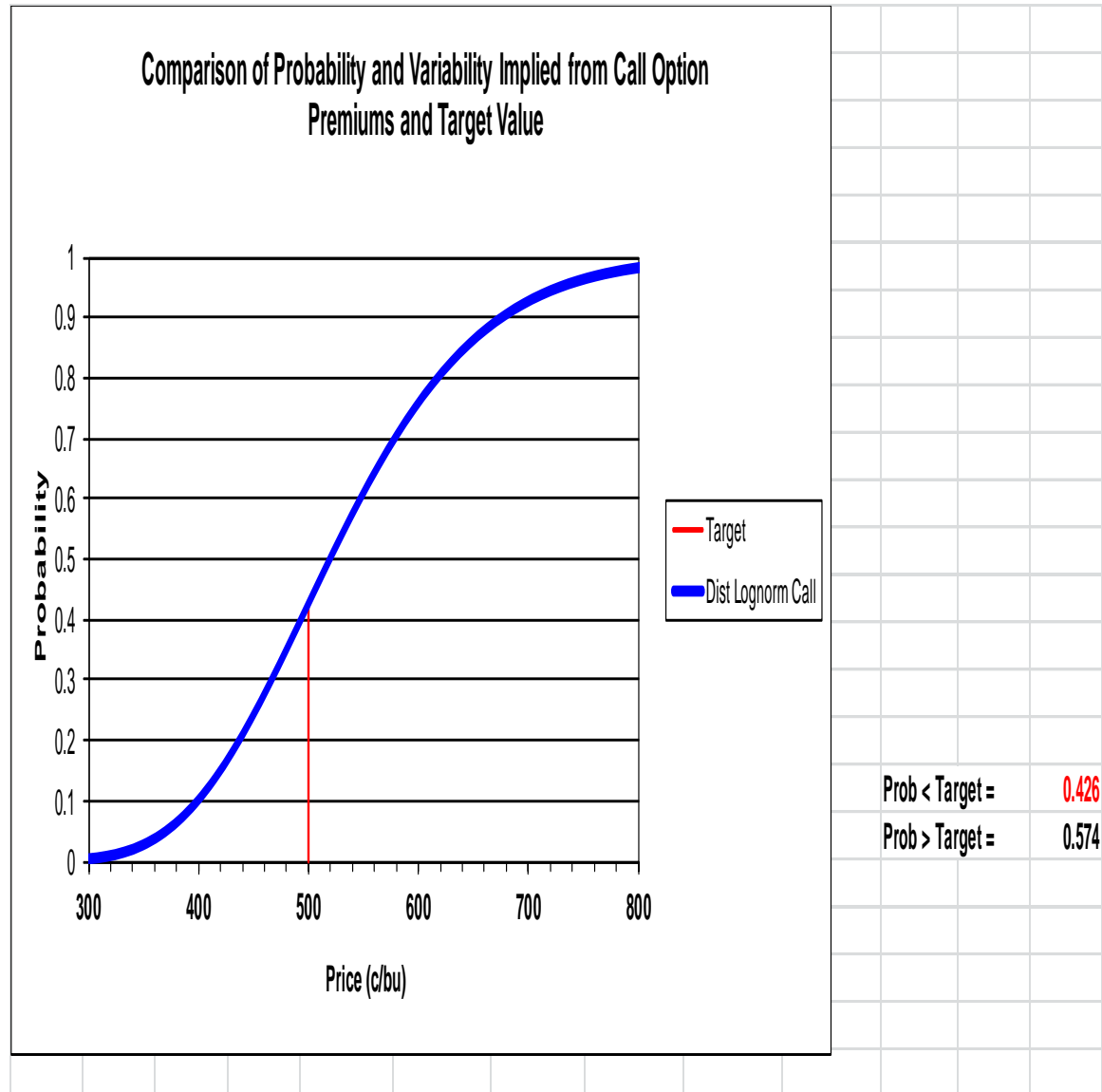
Distribution of Wheat Forecast Estimates for Q4 2013



Statistics		
	Input	Laplace
Minimum	600.00	-∞
Maximum	850.00	+∞
Mean	721.35	725.00
Mode	≈731.67	725.00
Median	725.00	725.00
Std Dev	62.44	59.10
Skewness	0.1024	0.0000
Kurtosis	3.9857	6.0000
Left X	600.0	600.0
Left P	5.0%	2.5%
Right X	850.0	850.0
Right P	95.0%	97.5%
Dif. X	250.00	250.00
Dif. P	90.0%	95.0%
1%	600.00	561.51
5%	600.00	628.77
10%	640.00	657.74
15%	665.00	674.68
20%	665.00	686.71
25%	700.00	696.03
30%	706.90	703.65
35%	706.90	710.09
40%	720.00	715.67
45%	725.00	720.60

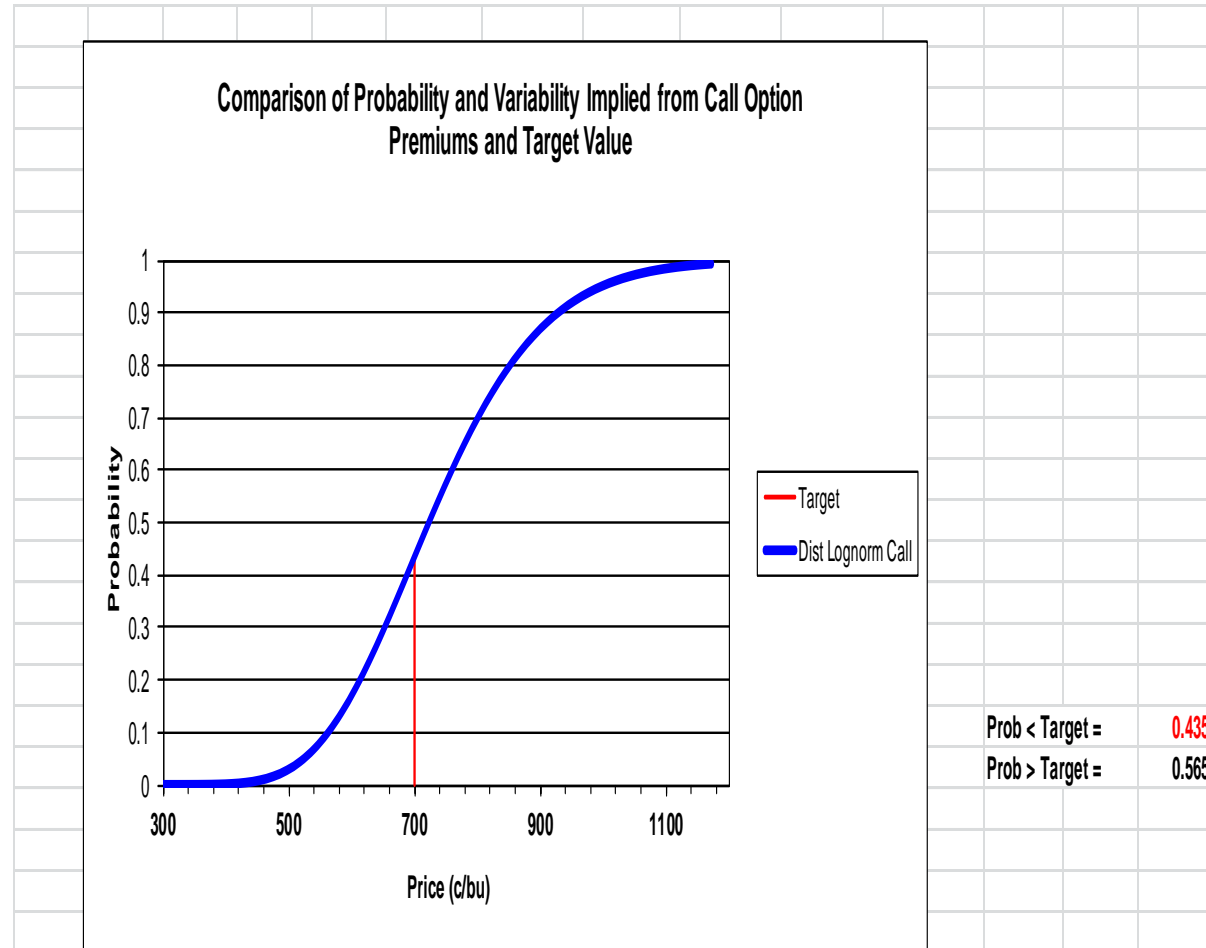
Corn (CME) Price Projection Distribution Using Options: Dec 2013

- **Concept:** Projections based on inference of option premiums and volatilities into price distributions
- **Result 1:** Prices could range from ,400 to 700c/b (90% chance)
- **Result 2:** Probability prices will be less than 500c/b: .43



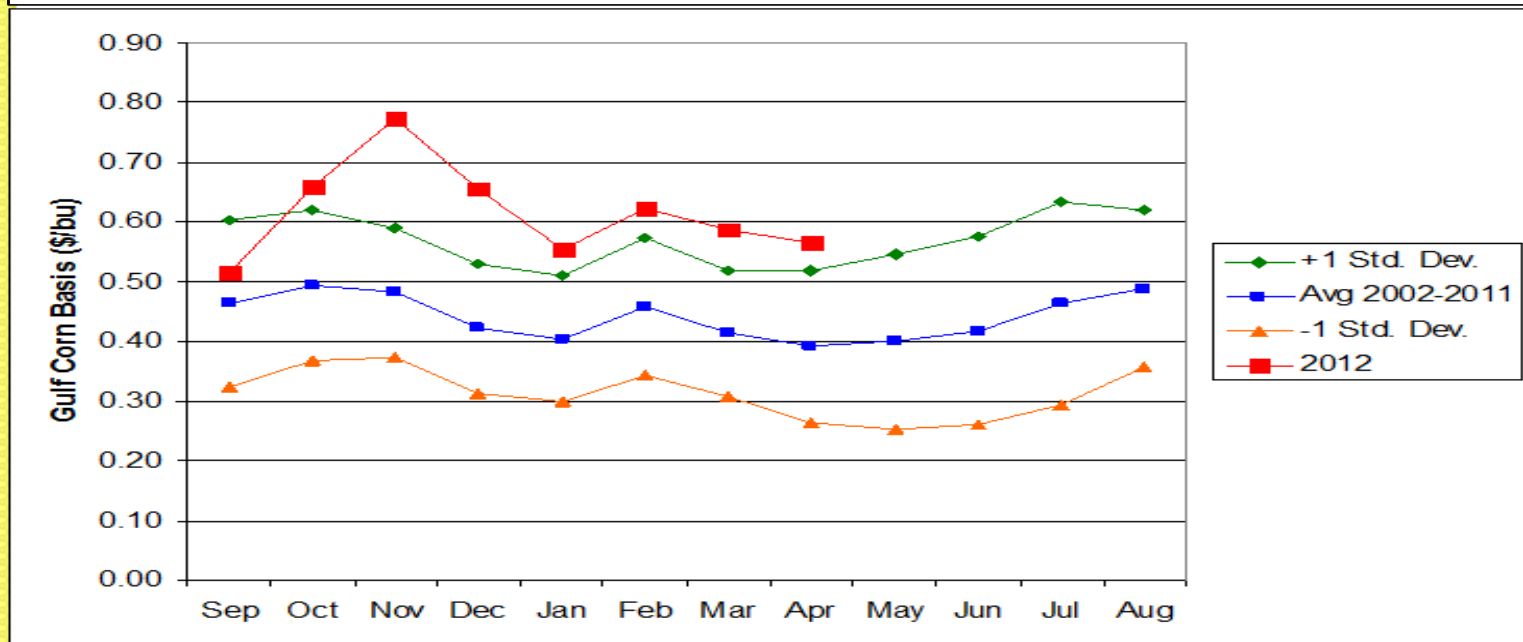
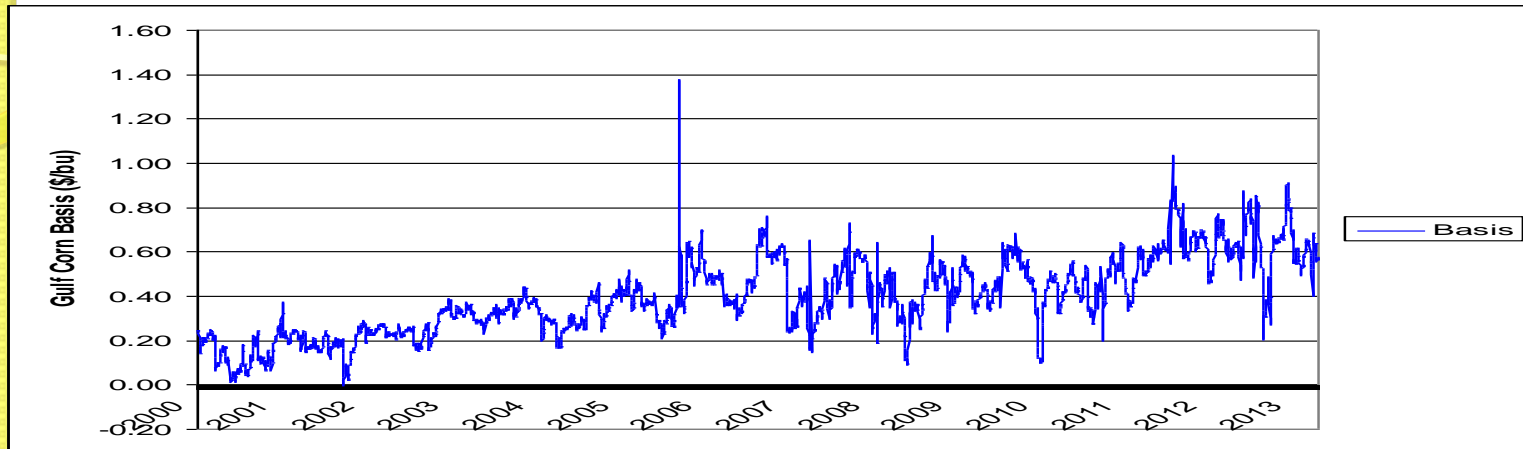
Wheat (CME) Price Projection Distribution Using Options: Dec 2013

- **Concept:** Projections based on inference of option premiums and volatilities into price distributions
- **Result 1:** Prices could range from 600 to 950c/b
- **Result 2:** Probability prices will be less than 700c/b: .44 ■

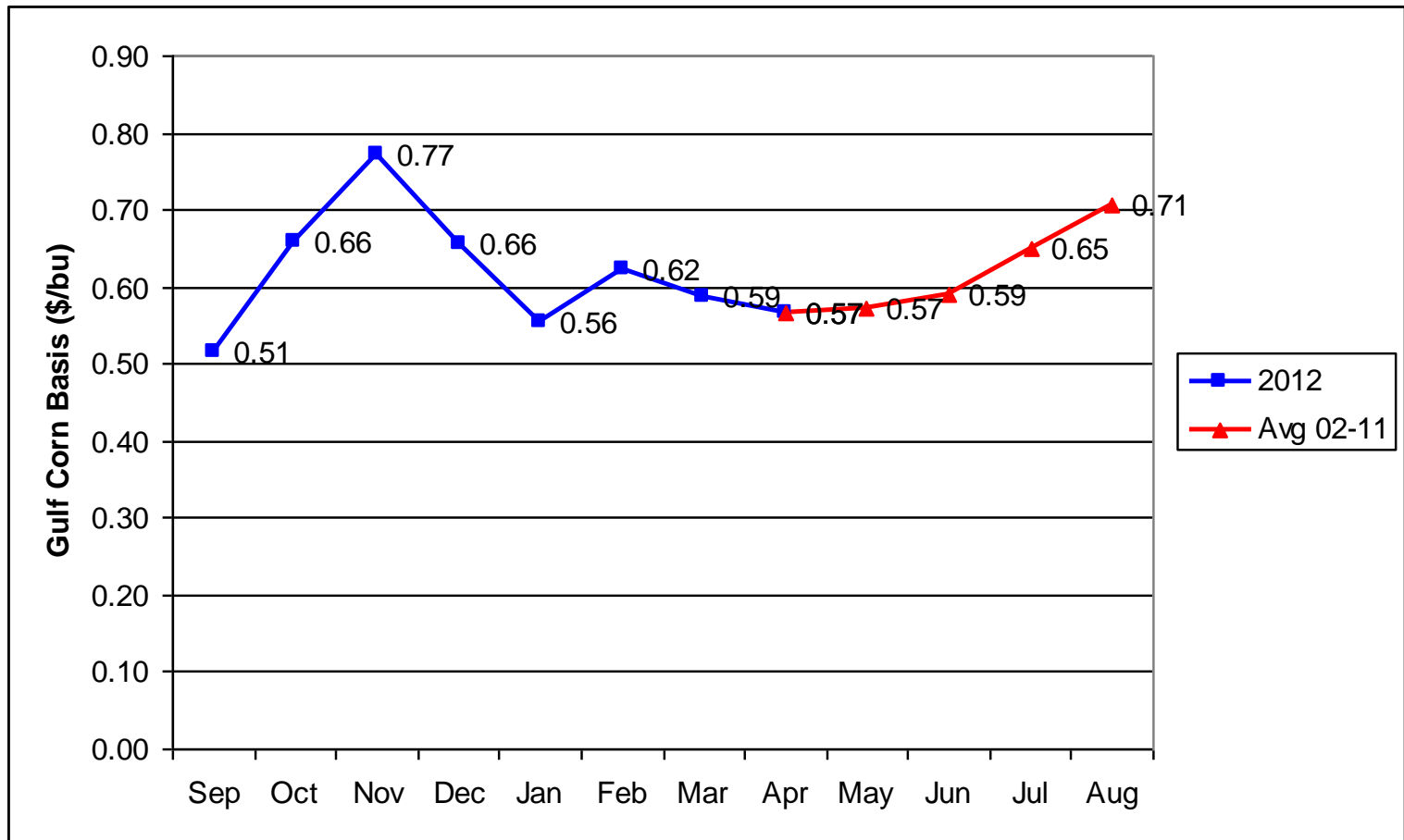


Basis Values

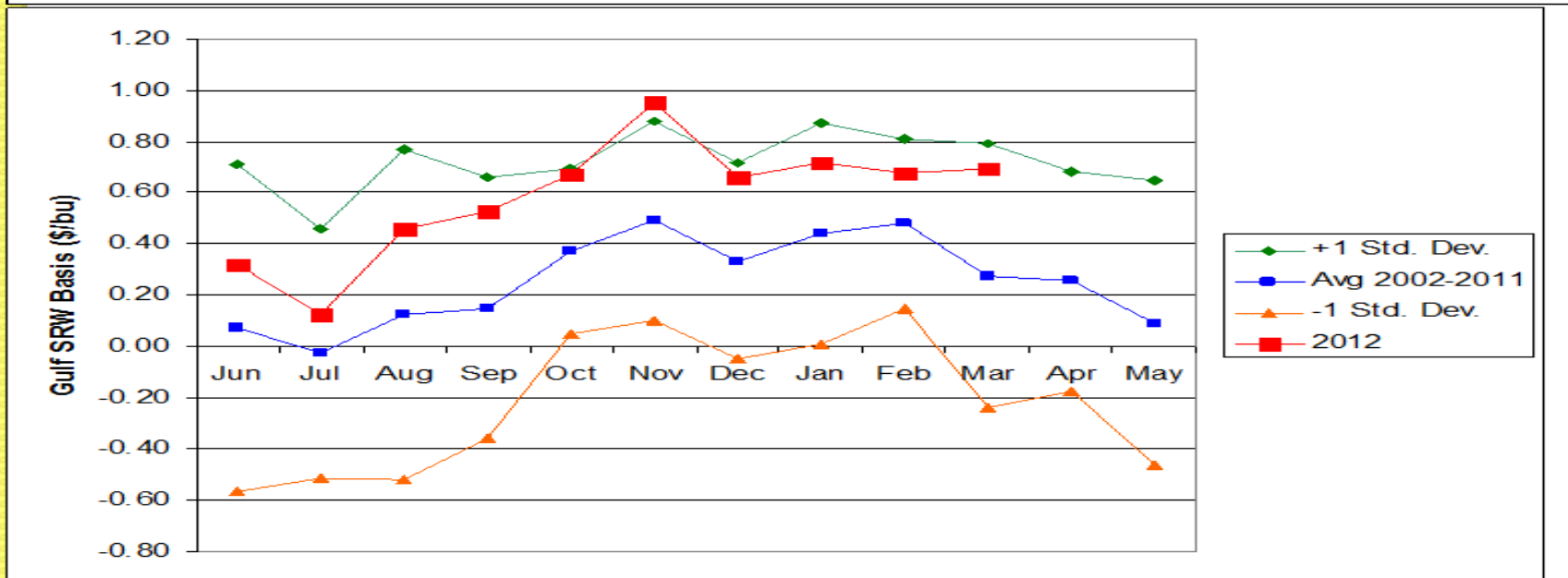
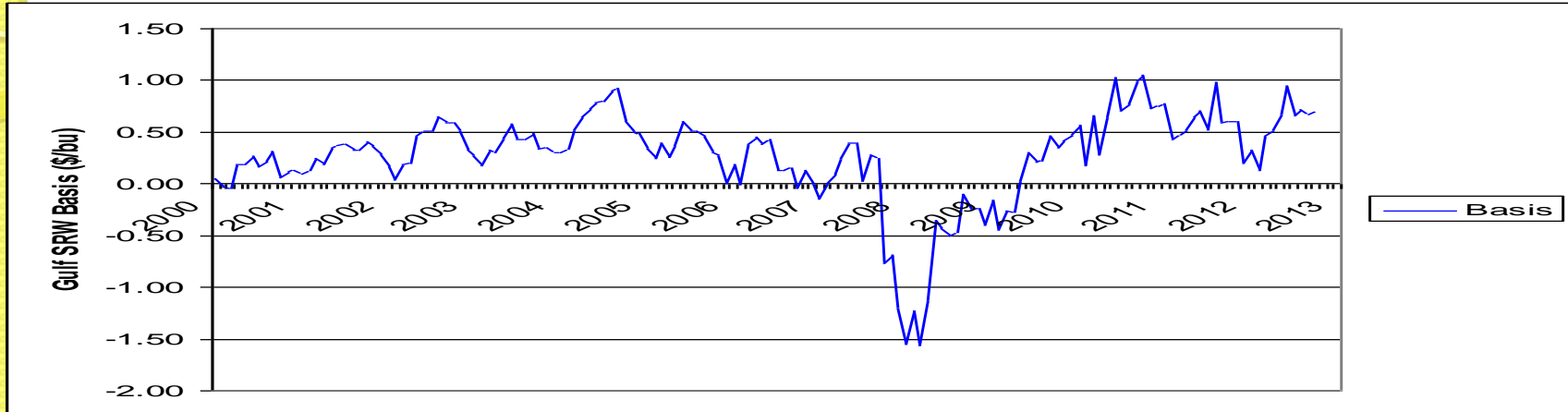
Gulf Cash Corn Basis 2000-2013



Gulf Corn Basis: Seasonal Forecast

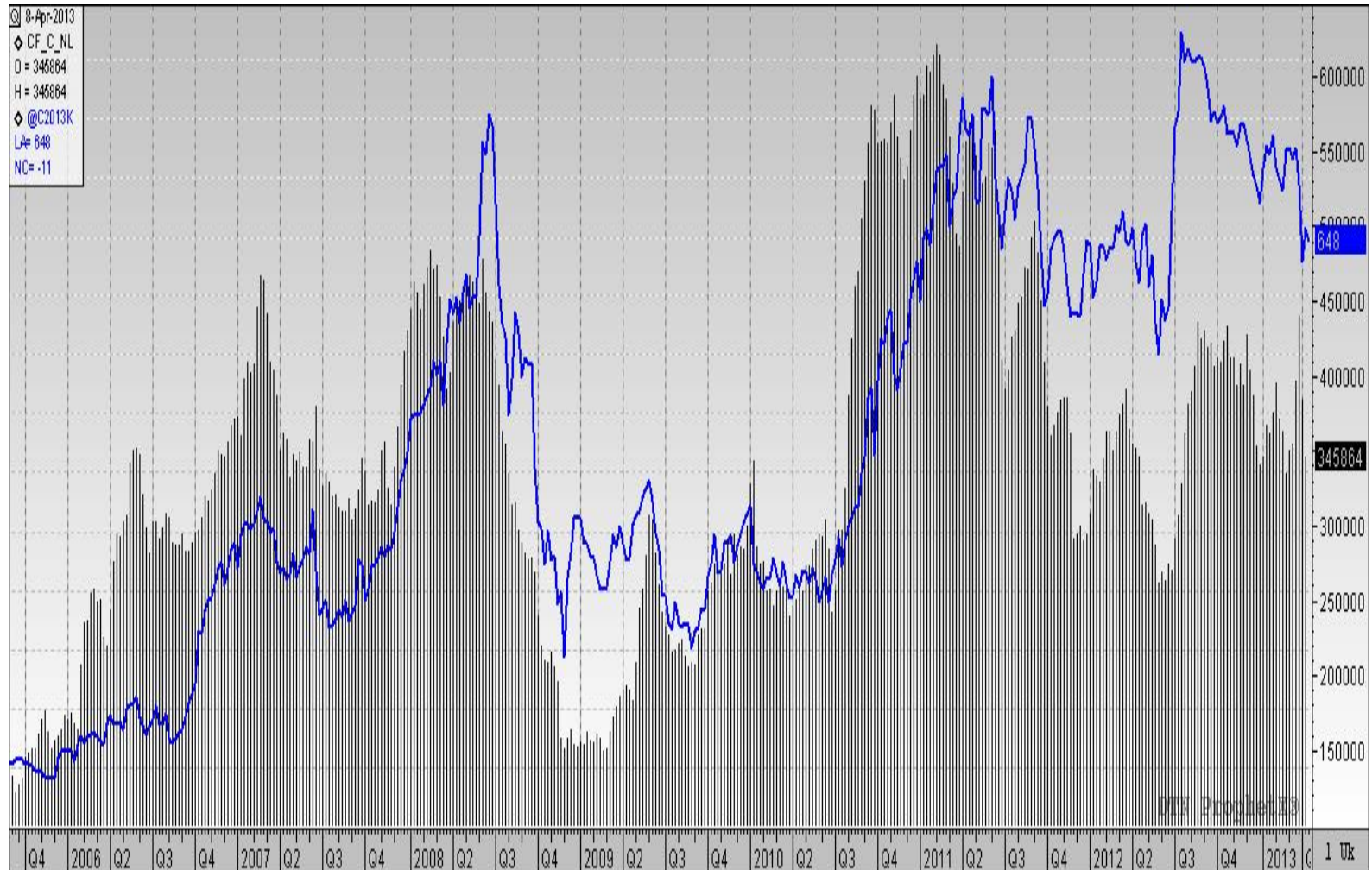


Gulf Cash Wheat Basis 2000-2013

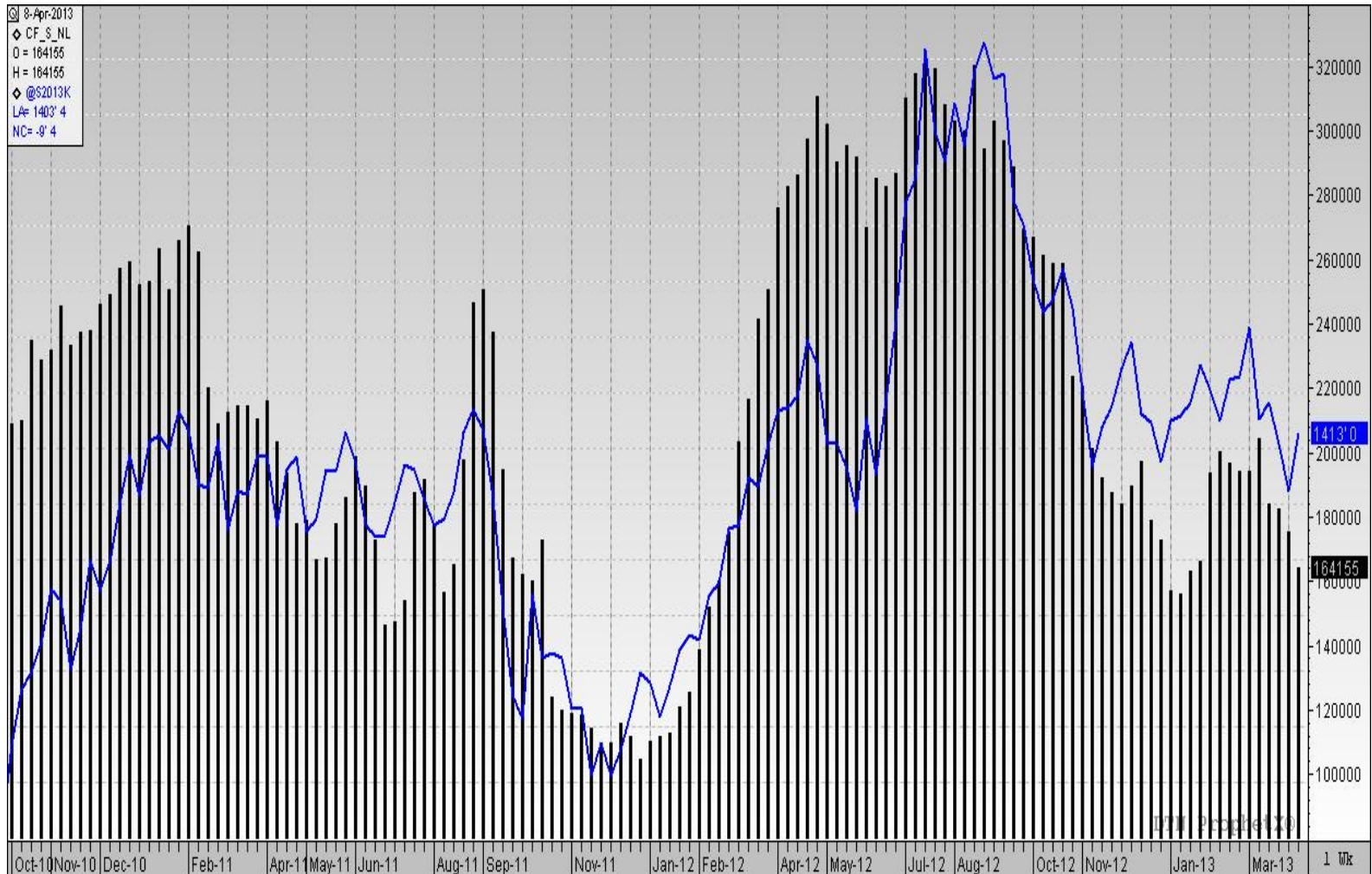


Corn Non-Commercial Long vs.. Nearby Corn Futures

Liquidation is dragging down futures

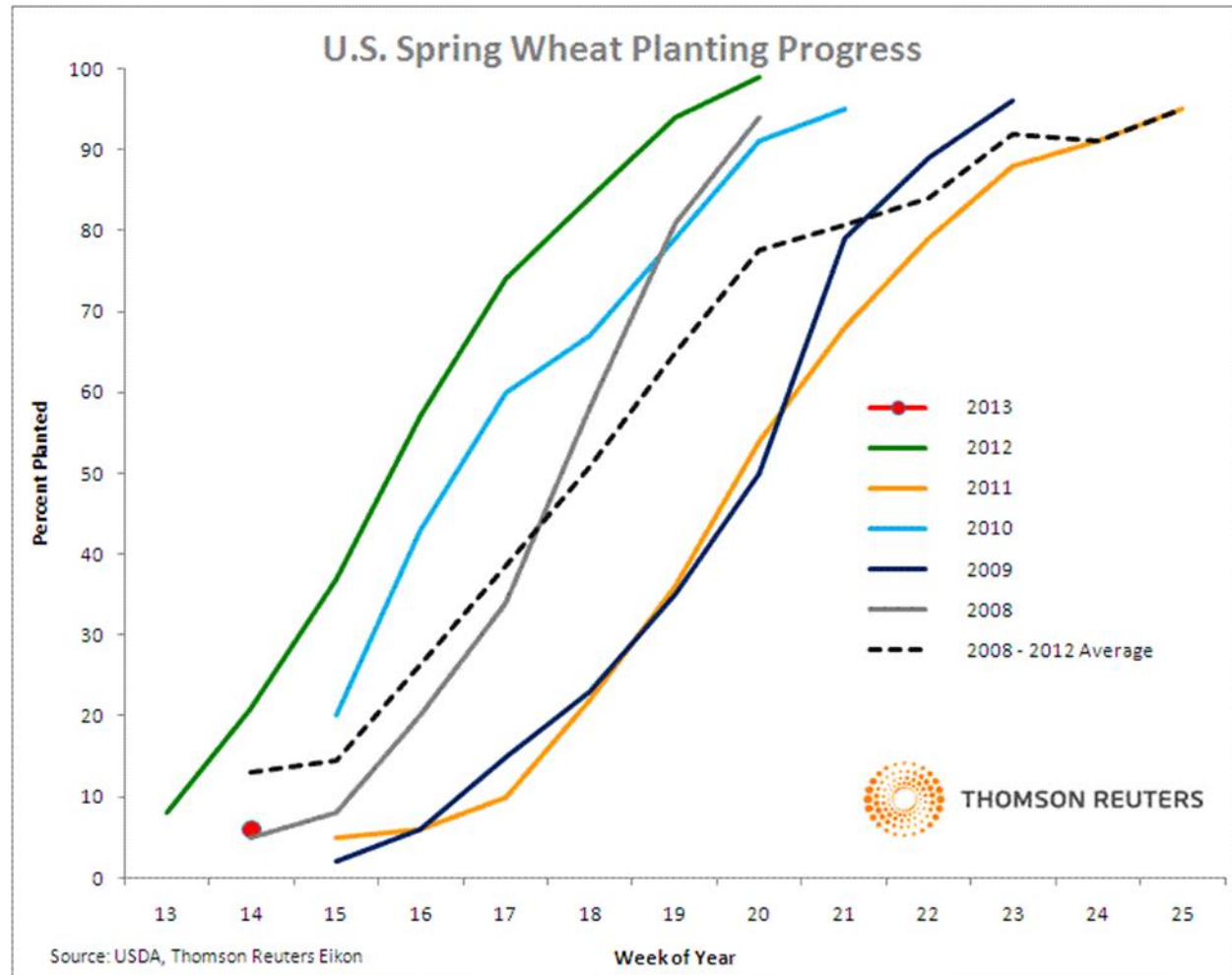


Soybean Non-Commercial Long vs.. Nearby Soybean Futures



Emerging Concerns in N.Am. Wheats

- Late planting
- Dryness in HRS

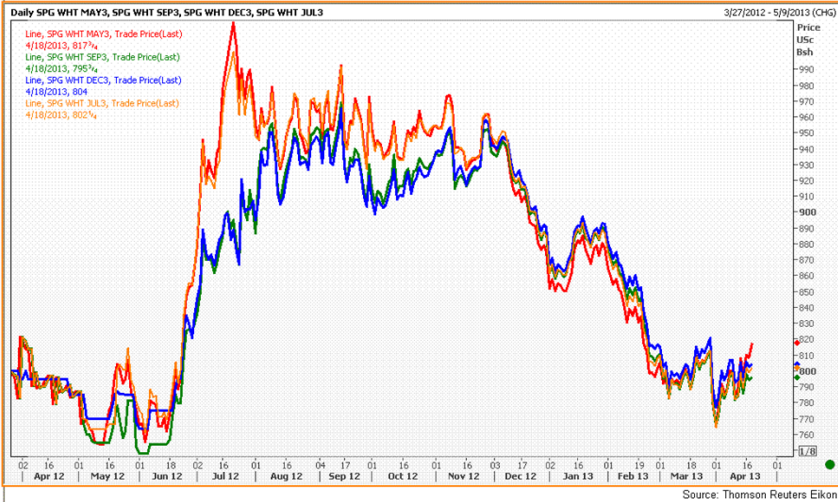


Nearby Rally in HRS

Nearby Months increasing to deferred & Msp increasing to KC

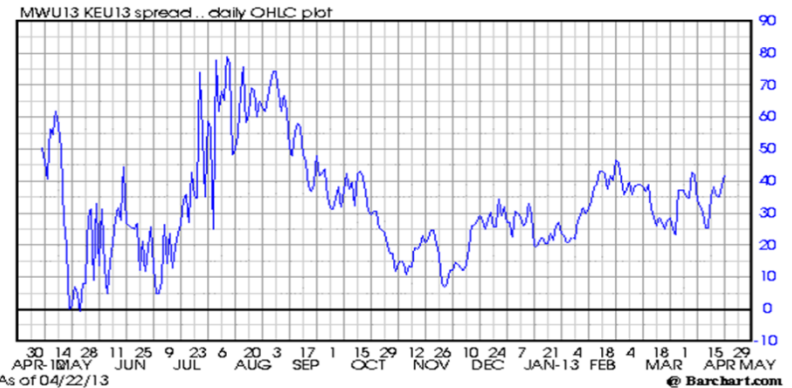
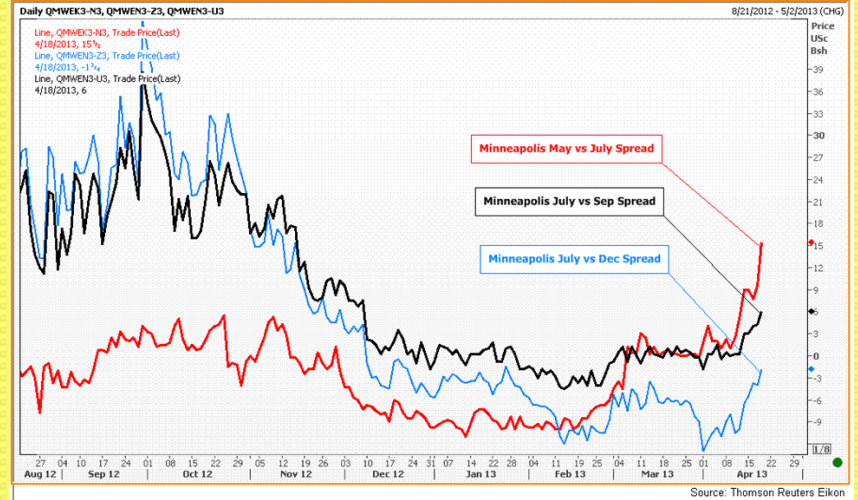
Nearby spring wheat prices outperform deferred contracts

Even with planting delays due to wet weather, nearby Minneapolis futures are outperforming new crop prices.



May/July spring wheat outpaces later-dated spreads

The May/July spread has clearly outperformed later-dated spreads lately. But further planting delays could support the July/Dec as well.



Wheat Prices Beginning to Rally

Summary and Outlook: Overall Markets

- **Changes in marketing.** There will be mammoth changes in the marketing in 2013/14 (transition from shortage to surpluses and lower price levels, increase intermonth spreads)
- **Market outlook:** The market has turned generally negative
 - Notably increase corn stocks, increased corn plantings,
 - In addition to apparently improved growing conditions in US, Russia, Australia, and Canada.
 - USDA used fairly optimistic assumptions on corn yield, particularly relative to the current moisture conditions and outlook
- **Shorter term:** Look for continued declines as the market transitions from old crop to new crops.
- **Longer-term** (looking to November)
 - The key assumptions is normal weather conditions, and yields. Assuming these evolve, Dec 2013 corn could decline to 520 (though, some suggest sub-450 level) vs... 531 current
 - Based on expected National average corn price of \$4 (see above), and normal spread from national average price to futures of (-40 normal differential USDA price to futures)=440c/b future
 - Should the crop have problems due to late planting, inadequate moisture replenishment, etc.,
 - Corn prices would fall, but, not as much

Major Factors Impacting Trade/Competition

- Evolving supply/demand and China
- Logistics

Macro Drivers to Changes in Agricultural Markets

- **Global supply and demand**
 - Demand growth exceeds productivity growth
 - China, Brazil, FSU
- **Biotechnology**—change in trend, geography, future traits, wheat, US vs..... ROW
- **Change in geography of production and trade**
 - Partly in response to biotechnology
 - More cropping alternatives
- **Biofuels**—35% of corn area in US is now supporting ethanol
- **Volatility**---more risky—
- **Major Themes**
 - Growth in exports driven by demand growth exceeding productivity growth (bullish—8-10 years)
 - *Greater competition from FSU and S. America*
 - Increase investment in ag and ag infrastructure
 - Increase in demands for R&D, particularly on technologies that improved productivity

Economist Magazine—Feb 2011...

- Increasing growth rates in consumption
- Declining area planted world wide
- Productivity growth rate is insufficient to meet demands

Wilson Average growth rate in demand for most grains/oilseeds is 2-4%

- Across all countries and grains
- Varies with many countries in the 1-2% growth rate area
- This is in addition to new sources of demands (biofuels)
- **Yield growth rate:**
 - about 1-2%/year (wheat=.8%/yr; ND=1.5%/yr) corn 1.4%/year)
- **Implication:**
 - More land,
 - More yield and technology
 - High prices and reduced stocks (and hence, more risk)



Summary of the Problem:



- Change in demand
 - Accelerating population growth
 - Urbanization
 - Dominance by China in many commodities
- Growth in ag productivity is slowing...
 - 1960's 3.5%/yr
 - 2010 1.5%
 - Fertilizer use increased from
 - 1961 2 t/sq km
 - 2010 11 t/sq km
- Declining area planted in many countries/regions of the world
- Paradigm shift in commodity prices
 - 1900-2000 declining prices
 - 2000 to current..rapid real appreciation in all commodity prices

Diminishing Agricultural Productivity

Growth in ag productivity is slowing...

- 1960's 3.5%/yr
- 2010 1.5%
- Fertilizer use increased from
 - 1961 2 t/sq km
 - 2010 11 t/sq km

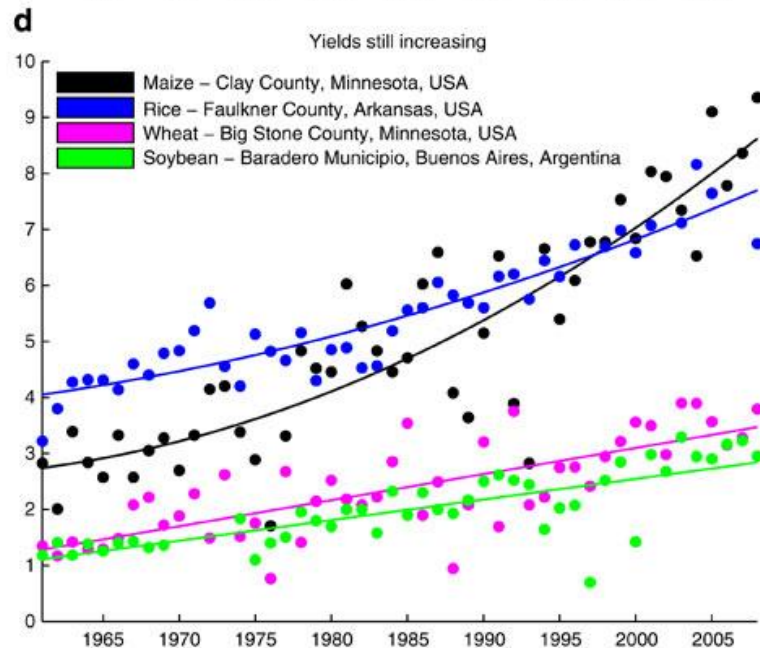
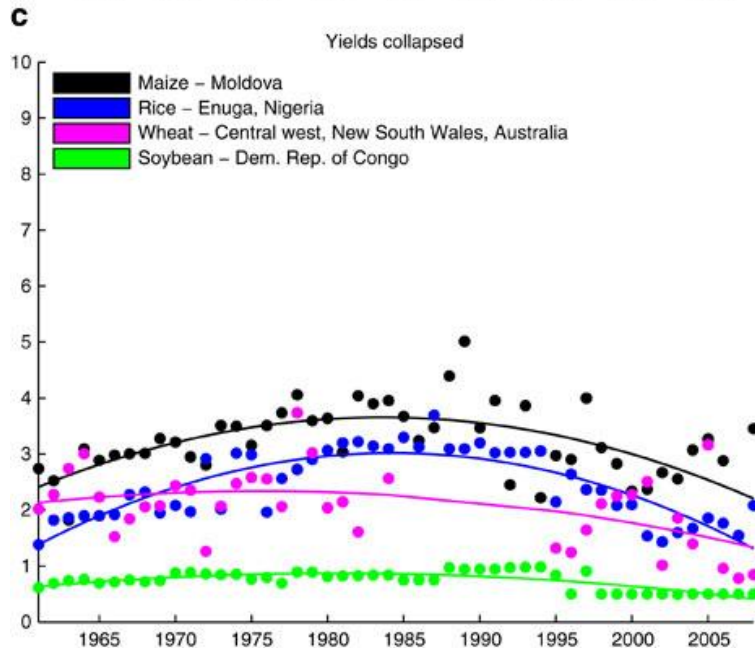
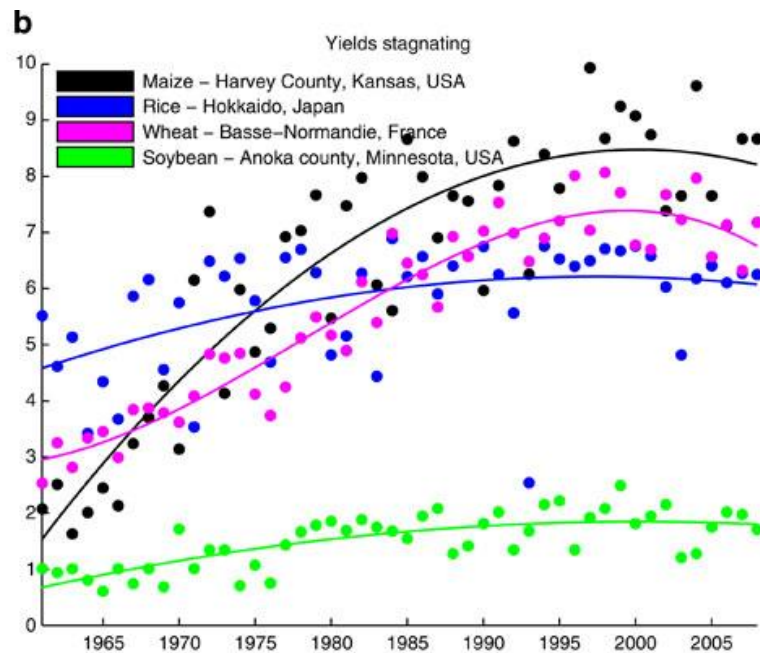
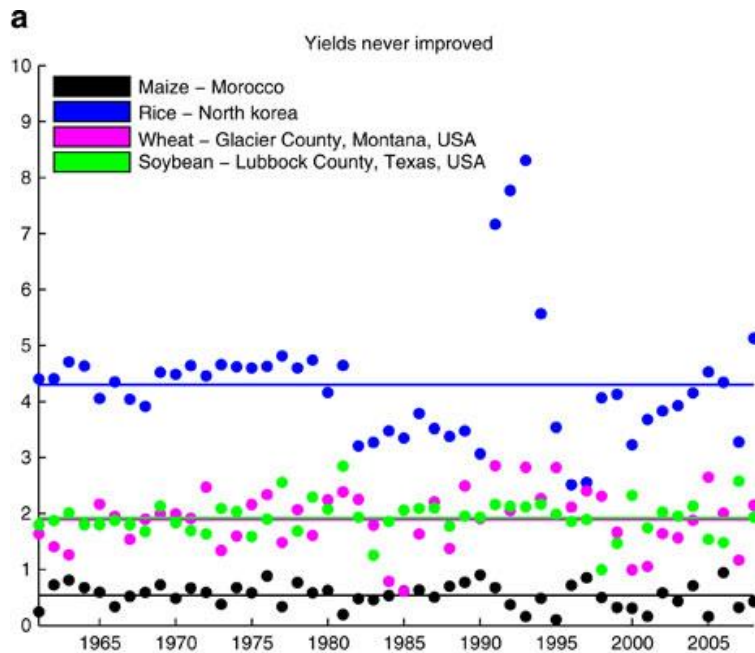
Recent results: Yields either never improve, stagnate or collapse across 24–39% of maize-, rice-, wheat- and soybean-growing areas

Implication

- challenge of meeting increasing global agricultural demands.
- New investments in underperforming regions, as well as strategies to continue increasing yields in the high-performing areas, are required.

Ref: Ray et al, 2012, "Recent patterns of crop yield growth and stagnation," *Nature Communications*, Dec 2012

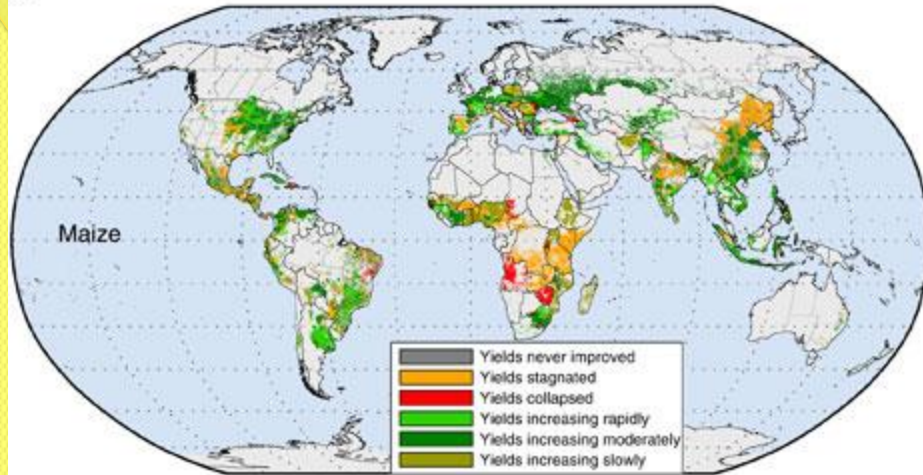
Diminishing Agricultural Productivity



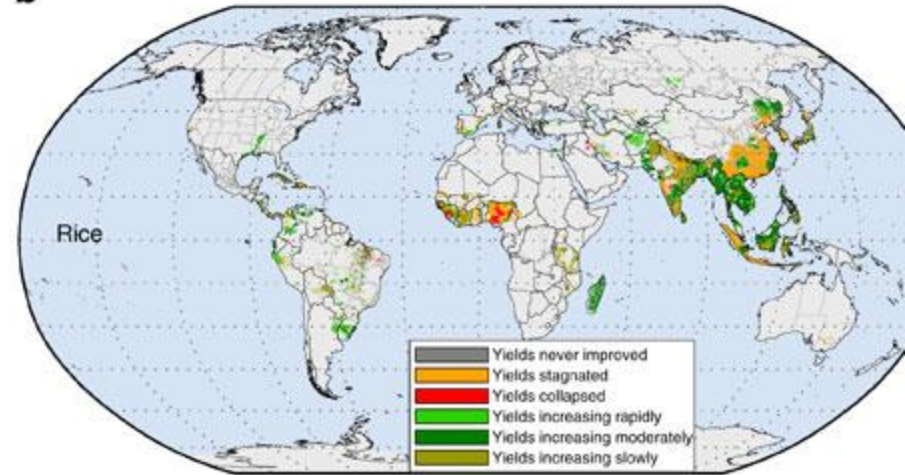
Cereals Productivity

Ref: Ray et al, 2012, "Recent patterns of crop yield growth and stagnation," *Nature Communications*, Dec 2012

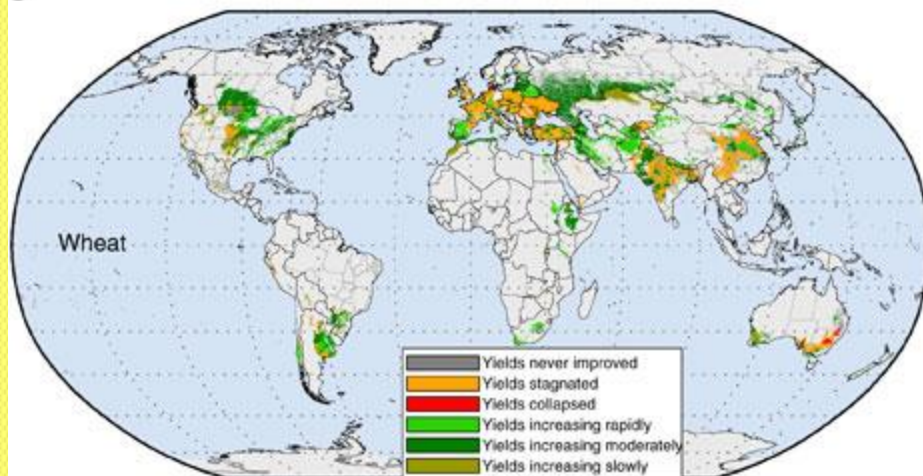
a



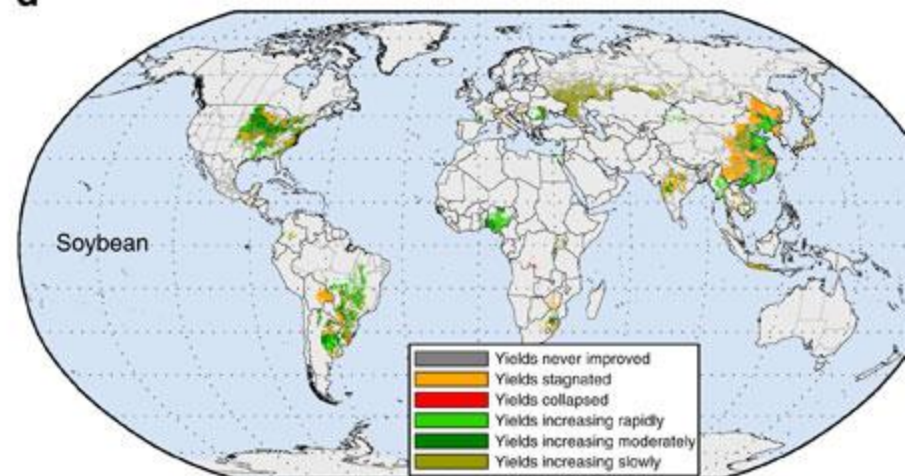
b



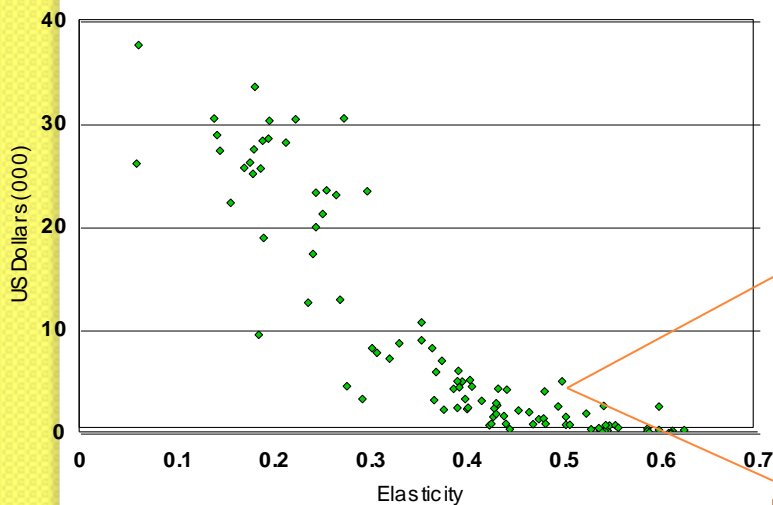
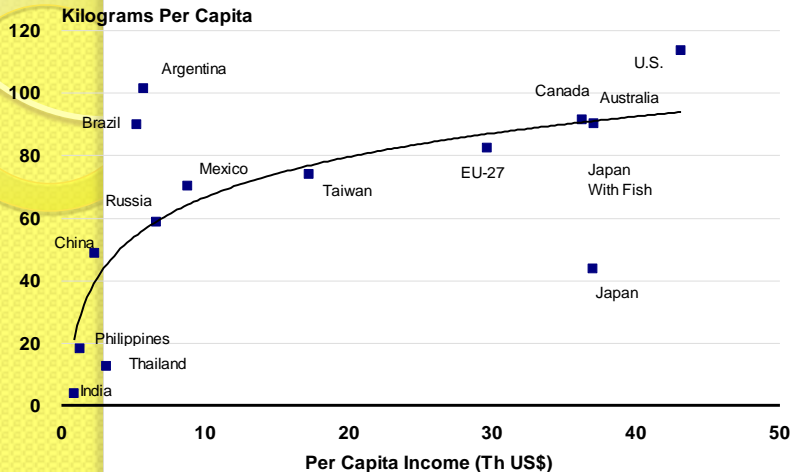
c



d



Demand: Where Does the Growth Come From (e.g., Soybean)?



Income Elasticity of Demand: (% ΔD / % ΔI)

China

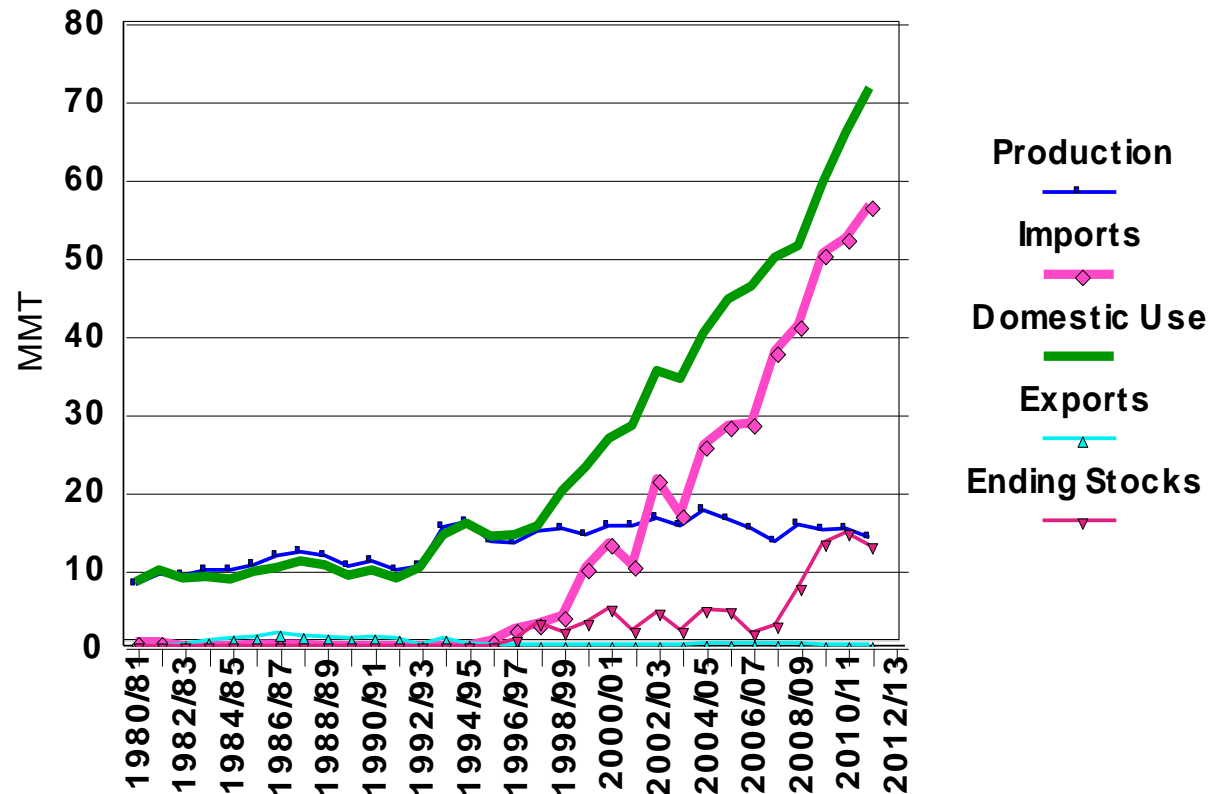
- Source of Demand Growth driven by:
 - Population, income growth, urbanization, women in work force and demographics
- Income growth: impacts of large income elasticities (% ΔD / % ΔI)
 - China: .47 vs..... US <.15
 - NAfrica, SE Asia, S Africa also have relatively large income elasticities of demand for soybeans,
 - Africa...very high elasticity, but, no income
- **Urbanization, women in the work force and population demographics!**
 - Results in irreversible changes in diets
 - Similar impacts in corn, higher-protein wheats

Chen Xiwen, deputy director of the Leading Group on Rural Work under the Central Committee of Communist Party of China

“If the country’s grain output will not speed up, possible food shortage will threaten the development of urbanization....,” In order to underpin the development of urban expansion, China has to make efforts to secure a stable supply of grain ...

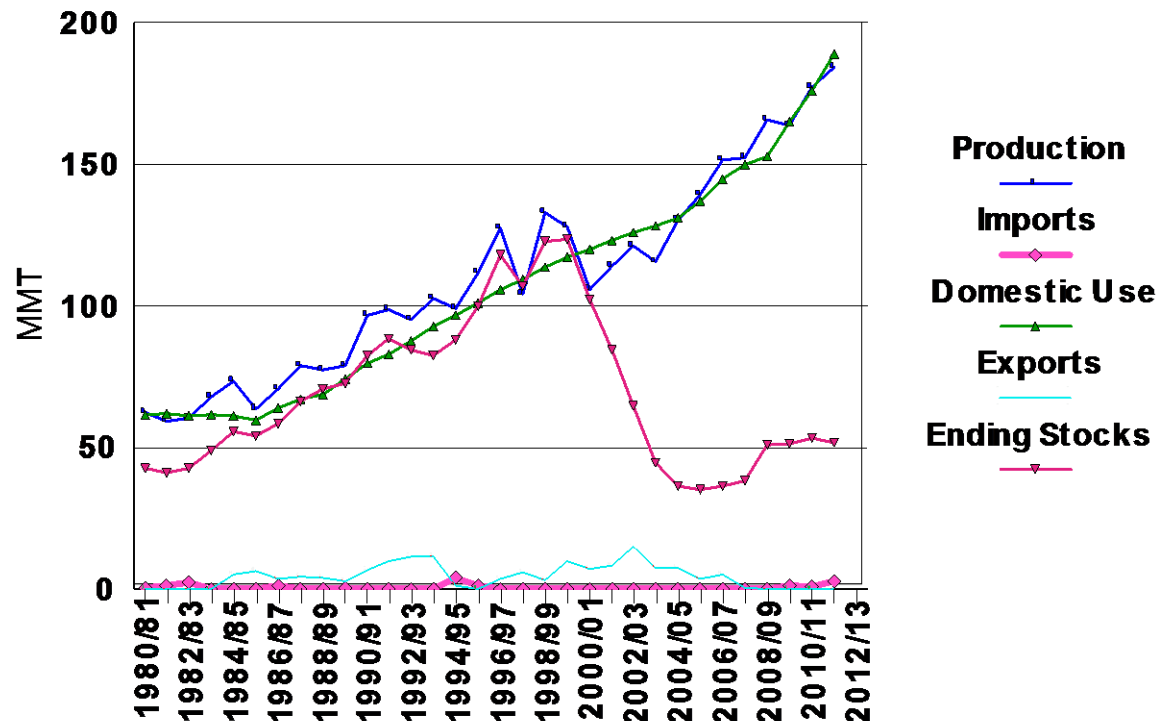
China Soybean Supply Demand

- **The fastest growth market in the world is China Soybean Imports**
- **This has induced**
 - **Huge investments in port (PNW)**
 - **Infrastructure and expansion in rail/handling capacity**
- **Longer term:**
 - Recent concerns of slowing demand growth..due to bird flu
 - Projections to 2021 by USB (Informa): 106 mmt (vs... current ≈ 58mmt)
 - USDA 2013: increase to 103 mmt in 2022/23
 - PROExporter (July 2012) China imports to increase at 2 mmt/yr



China Corn Supply Demand

- **Past:**
 - Periodic exporter (from North to South)
 - Draw down in stocks is a significant change in policy in early 2000
- *Recent suggestions of like acceleration in corn imports*
 - Hanver Li (JCI Intelligence) anticipates that China will import as much as 15mmt in 2014-2015.
 - Basse (November 2011) at 8-12 mmt by 2014
 - Rabobank 10 mmt (Nov 2011) by 2014 (down from 25 mmt est in Dec 2011):
- 2013---with lower prices, China has indicated imports of corn at 7 mmt

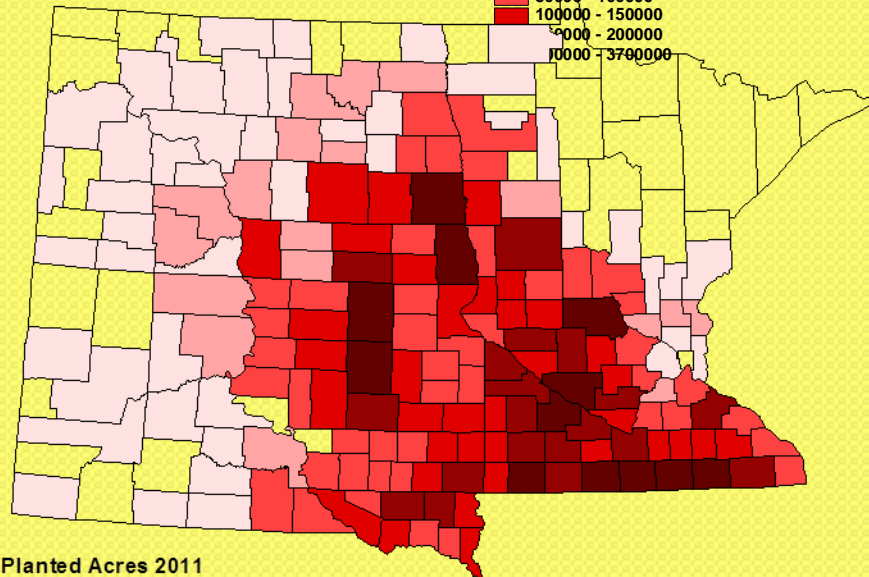
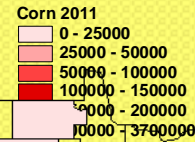
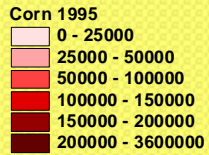
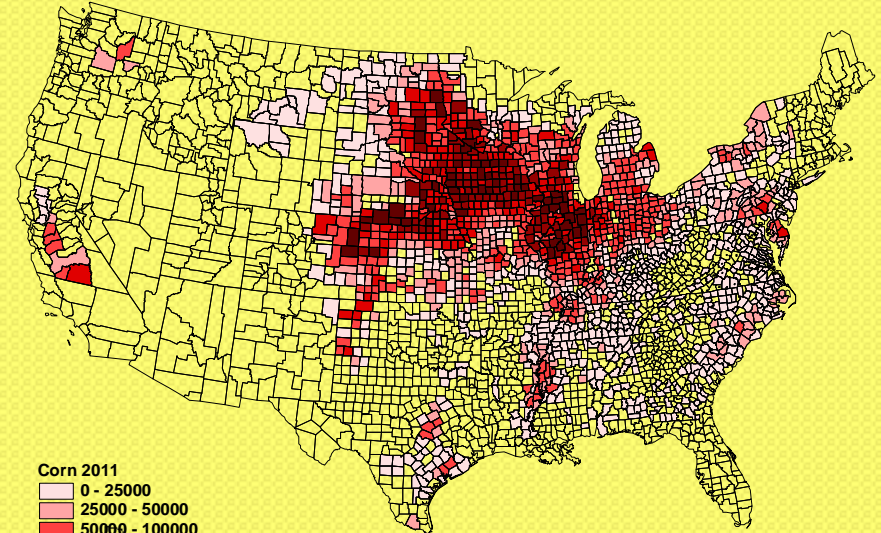
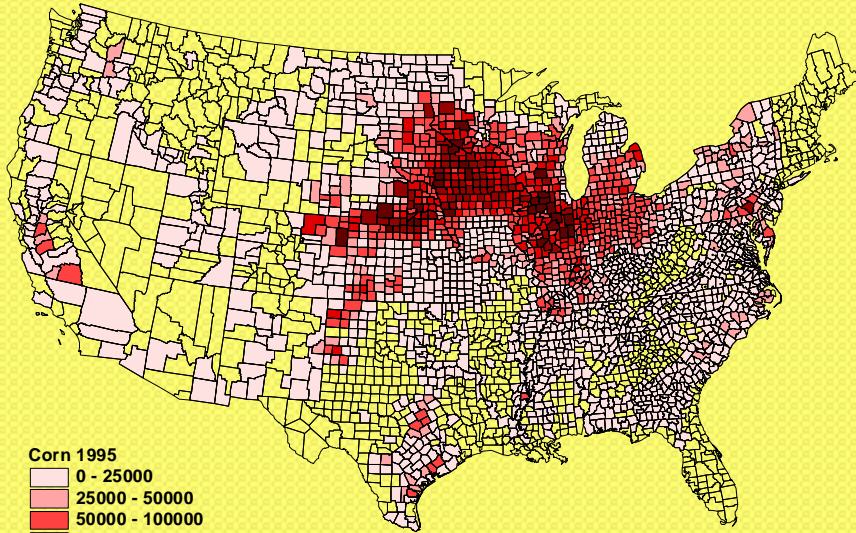


Genetic Modification in Grain Crops— *Game Changer*

- Changing geography on production and displacing other crops, notably small grains
- Changing technology growth rates
- Impacts
 - First mover advantages to countries/regions/states targeted by agbiotech firms---4-5 year advantage
 - Greatest appreciation in land values
 - *those regions transforming from non-GM technology; to more GM technology.*
 - *i.e., technology efficiency is partly capitalized into value of technology and value of land for which the technology is applied*

Corn Planted 1995

Corn Planted 2011



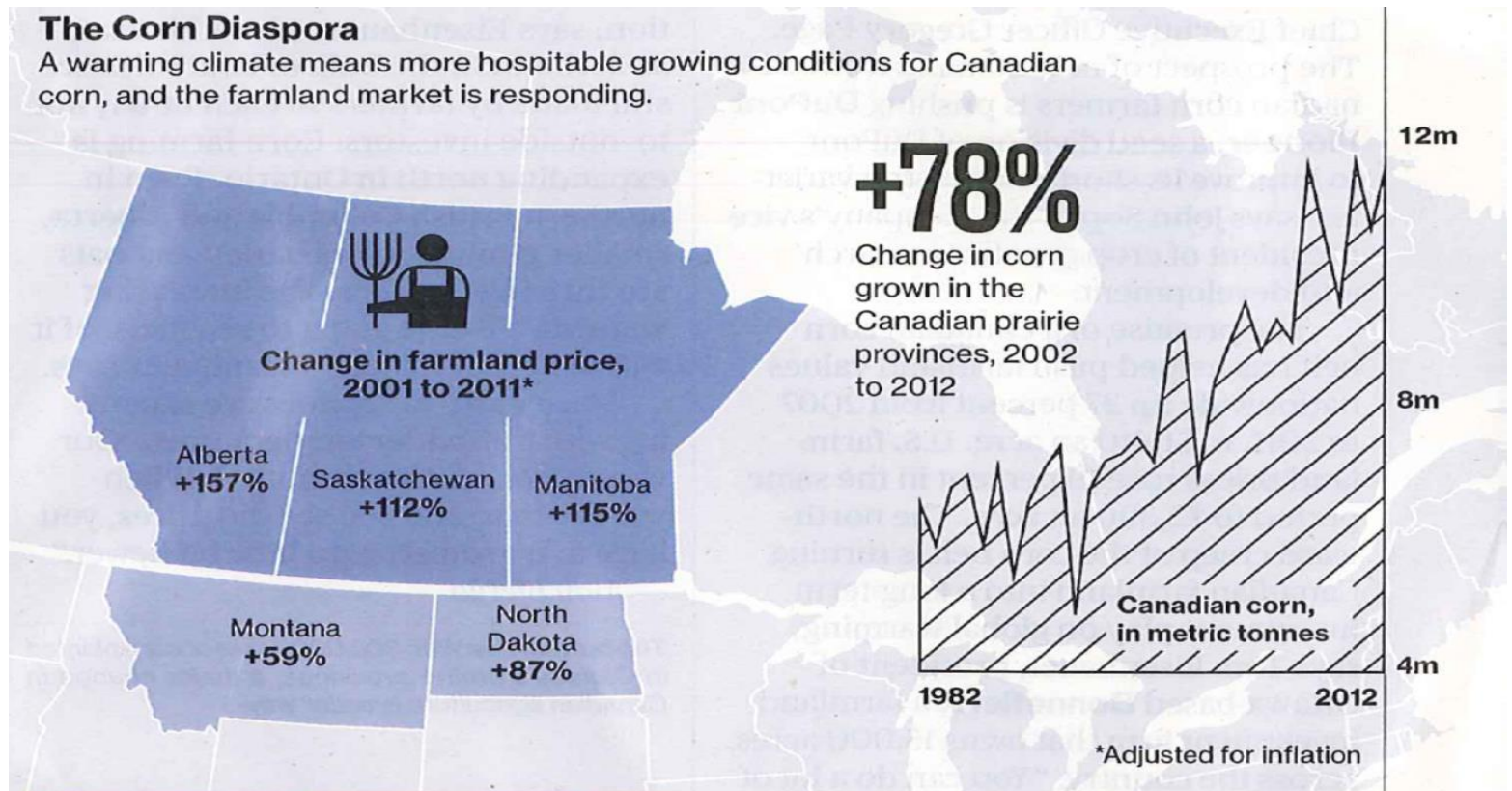
Corn Planted Acres 2011

Corn Belt Moves North!

BusinessWeek, Nov 12

The Corn Diaspora

A warming climate means more hospitable growing conditions for Canadian corn, and the farmland market is responding.



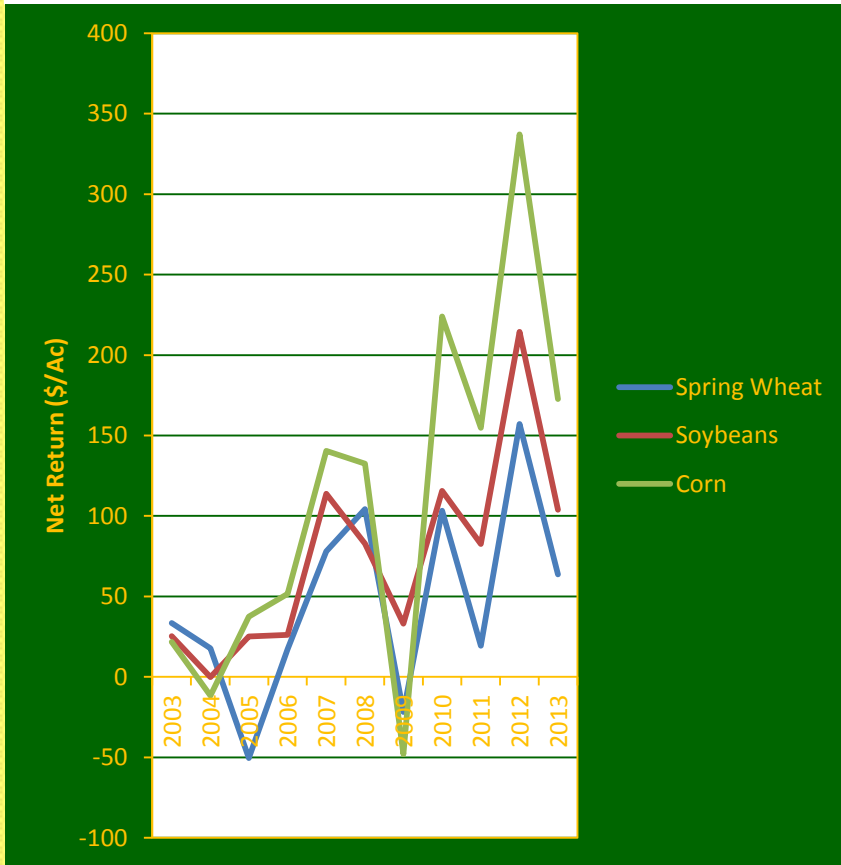
Climate Change

Canada's Corn Belt Attracts the Hot Money

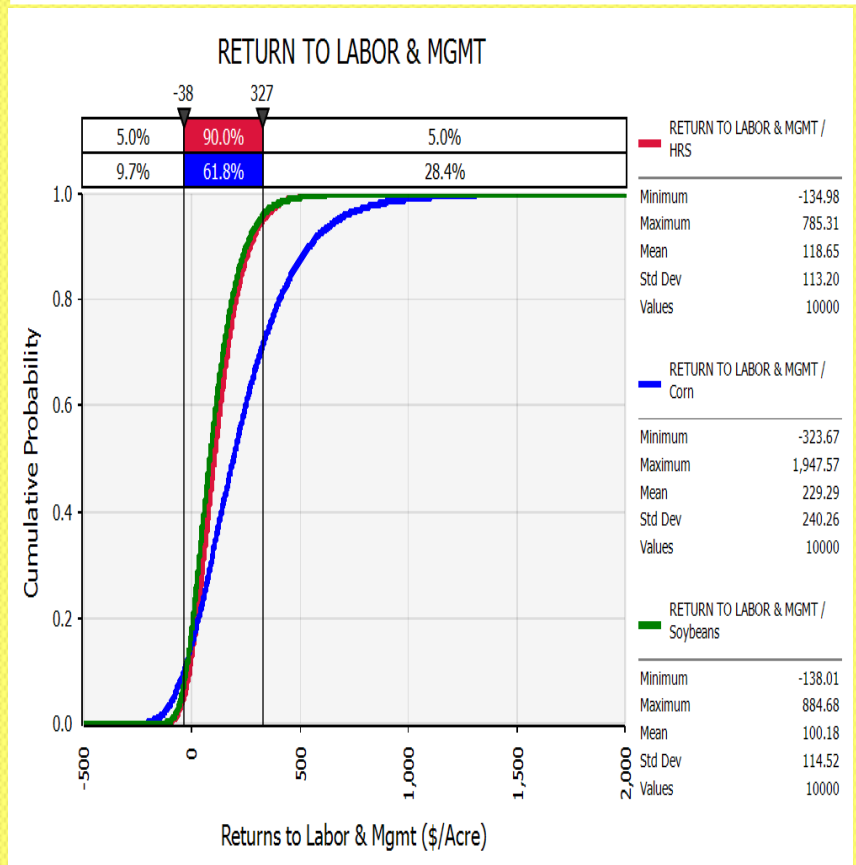
is likely to climb by as much as 3C (6F) in the region by 2050, according to Canadian researchers.

A temperate climate and longer growing season are ideal for corn. An

Net Returns/ac:



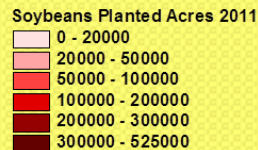
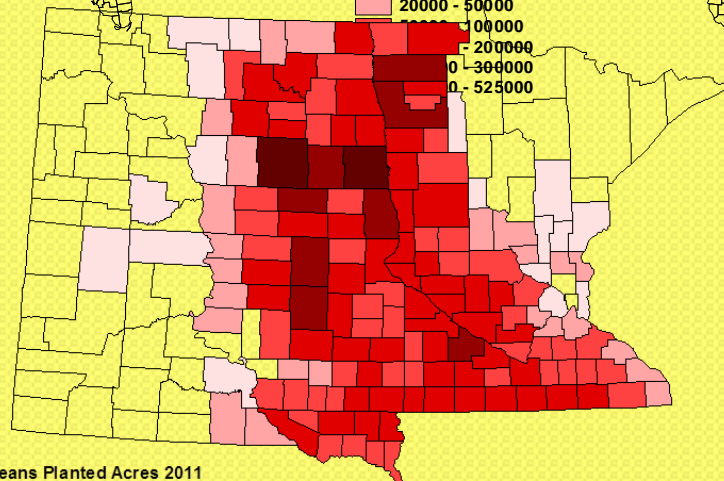
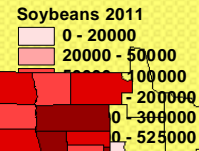
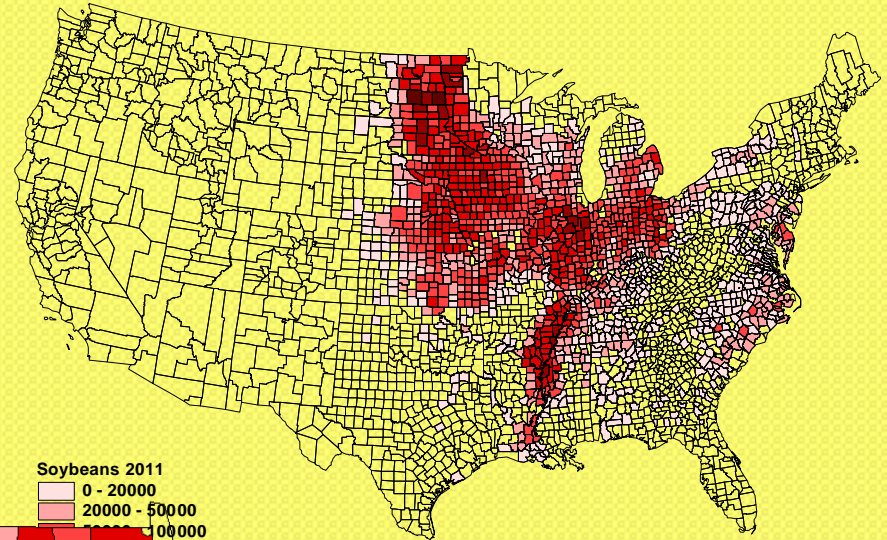
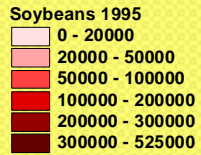
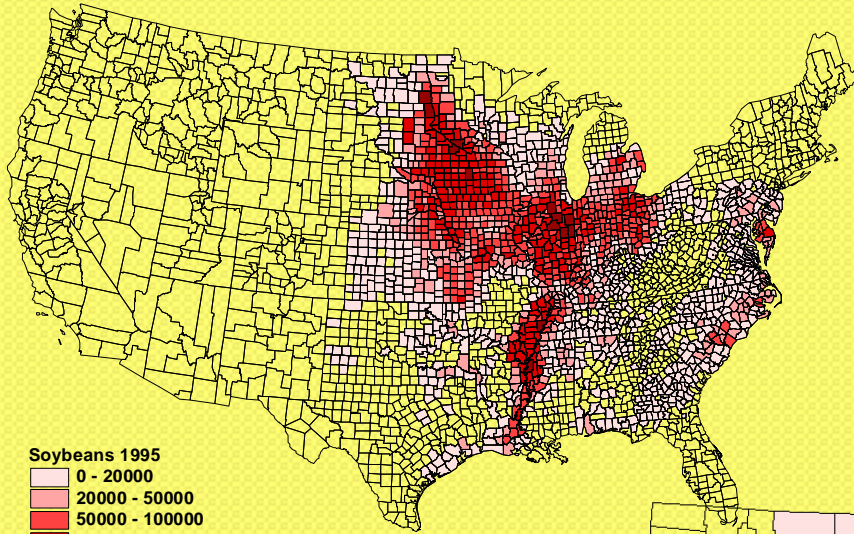
Jamestown ND



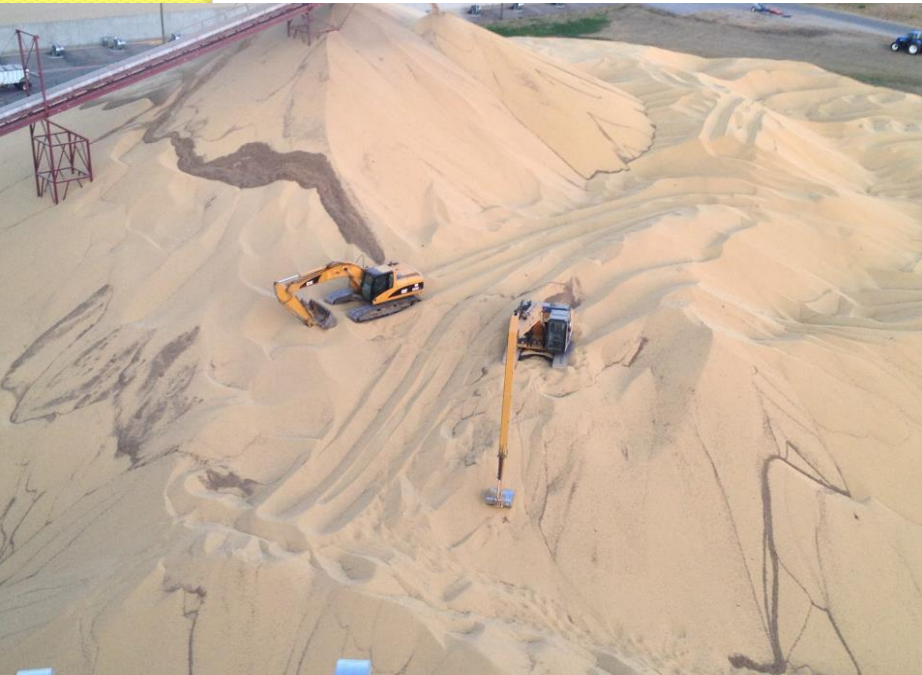
Net Return Per Acre and 2013: Jamestown ND
ND Farm Mgmt Records

Soybean Planted Area 1995

Soybean Planted Area 2011



JVG—Southern ND October 2012



Ag Technology:

- *Massive resources and Money being spent on numerous technologies to improve productivity of agriculture*
- **The world will see massive changes in the coming decades as a result of these efforts**
- *Seeds, biotechnology, machinery, water, informatics, logistics, processing, food-safety*

Logistics: A Next Frontier of Competition

- Evolution of logistics efficiency in US and now N. American grains
- Compare: US (efficient logistics) to Brazil (inefficient/underinvestment)

BRAZIL SOYBEAN DEVELOPMENT AREA AND TRANSPORT PROJECTS

Lula initiated investment in infrastructure for exporting.

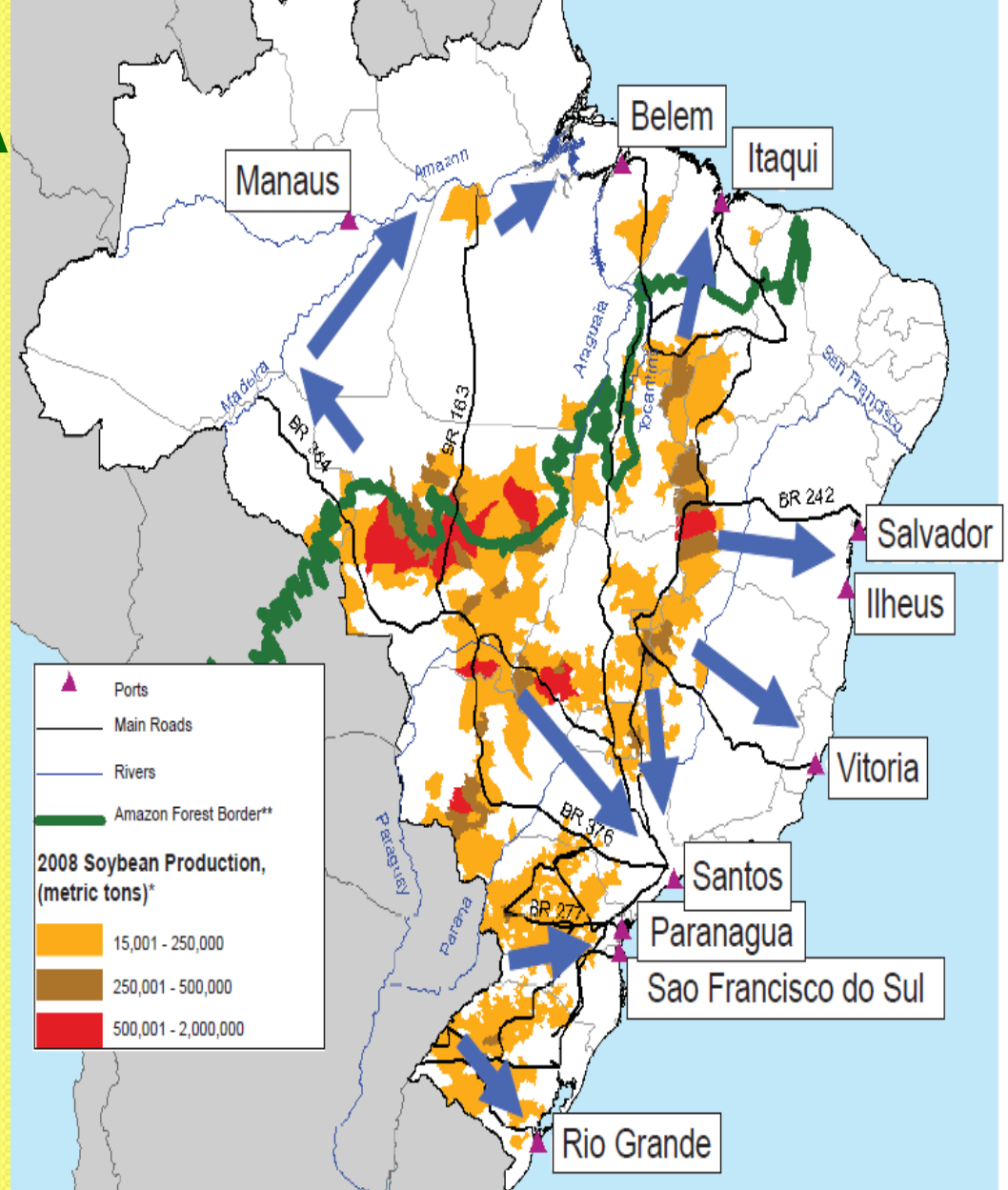
- Growth Acceleration Plan (PAC 1) 2007—2010
- National Plan of Logistics and Transportation (PNLT) 2008-2023
- March 2010 with the PAC 2 2011-2014.

\$60 billion was allocated for projects

25 billion to reduce bottlenecks, including expansion and renovation of port areas.

Key Observations

- BR163 and Rail to other northern Port Areas
- Potentially expand production and export competitiveness
- Closer to EU markets
- Prospectively closer via the Panama Canal to China
- Potential increase in production/exports +8mmt by 2020 in Amazon region



*Companhia Nacional de Abastecimento (CONAB)

**World Wildlife Fund (WWF)

Source: USDA/Agricultural Marketing Service & Foreign Agricultural Service

2013 Comparison

- Large crop
- Harvest expedited
- Extensive logistical problems including Larger crop needing to be exported
 - Trucks backed-up at port
 - Threats of labor strike
 - Inadequate road and rail infrastructure and weeks-long turnaround times at the region's busiest ports all regularly contribute to frustrating delays for buyers around this time of year, and more of the same seems to be playing out this year as well.
- Impacts
 - Buyers shifting some purchases from Brazil to USGulf
- March 18 2013 Brazil FOB Price quotes (Gavilon)
 - 15/3-4 10 nid vs. n/b
 - april -12 nid vs. -13 adm
 - may -12 ldc vs. -15 ama
 - june coamo +5/4 vs. chs even
 - jun/july +7/6 nid vs. 3/4 bge/chs

**Truck Lines in Brazil March 2013
(Agrex-Mitsubishi—I think)**



Thomson Reuters Mar 18 COLUMN-Swimming against the bearish soy market tide By Gavin Maguire

- The dominant narrative in the soybean market lately has been that South American growers are on the cusp of flooding the world with fresh supplies that should push soybean, soy meal and soybean oil prices lower over the near to medium term. But judging by the recent climb in all soy-related buy-side options, some people disagree and are instead anticipating a run higher in bean, meal and oil prices during the April/May timeslot.
- CRUNCH TIME
- Much of the recent flow of soy product options activity was confined to May contracts, and thus suggests traders are anticipating any upward shift in prices to take place over the coming 4-6 weeks, rather than over the longer term.
- Such thinking seems to be based on the assumption that even though the soybean harvest is well underway across Brazil and elsewhere in South America, logistical constraints are likely to keep the actual outbound flow of physical product to a trickle for the next several weeks. Strike threats, inadequate road and rail infrastructure and weeks-long turnaround times at the region's busiest ports all regularly contribute to frustrating delays for buyers around this time of year, and more of the same seems to be playing out this year as well.
- Indeed, there have been numerous reports of overseas buyers needing to redirect vessels from a holding pattern off the coast of Brazil up to the U.S. Gulf in order to load up on enough U.S. material until sufficient quantities of South American crops can finally be loaded out of that region's ports.
- However, crops and processed products always eventually do make it out and on their way to top consumers across Asia, Europe and other destinations, so there is a limited time span when U.S. exporters can expect to benefit from any impatient purchasers who have grown frustrated by long wait times out of Brazil and elsewhere.
- And recently a group of Brazilian port workers canceled plans for an imminent strike in order to continue negotiations, raising hopes that export flows will be less interrupted than had recently been feared.
- Even so, the recent swell in bullish options positions in U.S. soybeans, soy meal and soy oil suggests traders are still expecting a pick-up in demand for U.S. soy products over the coming weeks before the South American export season gets into full swing

US and Brazil Soybean Basis, Country Locations and Export Ports

- Interior shipping cost differentials result in Brazil growers receiving lower basis than US growers
 - by about 170c/b

US Basis

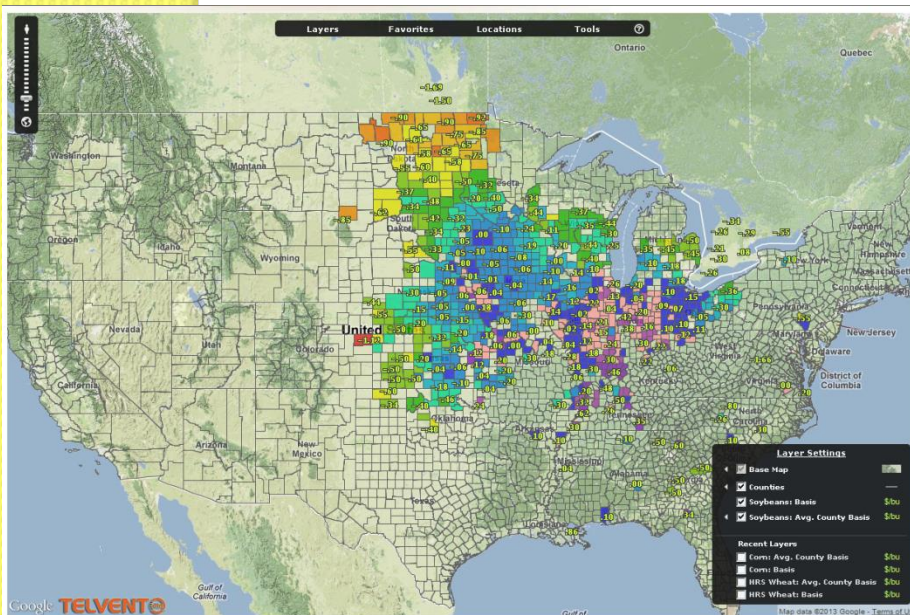
City	State	Basis c/bu
Jamestown	ND	-55
Lamberton	MN	0
Pleasant Hill	IA	-1
Lincoln	NE	40
Madison	SD	-29

Brazil Basis

City	State	Basis c/bu
Barreiras	Bahia	-332
Sorriso	Mato Grosso	-484
Rondonopolis	Mato Grosso	-345

Export Locations

City	State	Basis c/bu
US Gulf	LA	87
US PNW	OR	160
Paranaqua	Parana	-15



US vs. Brazil Prices

1) Show Menu 2) View Table Price Analysis

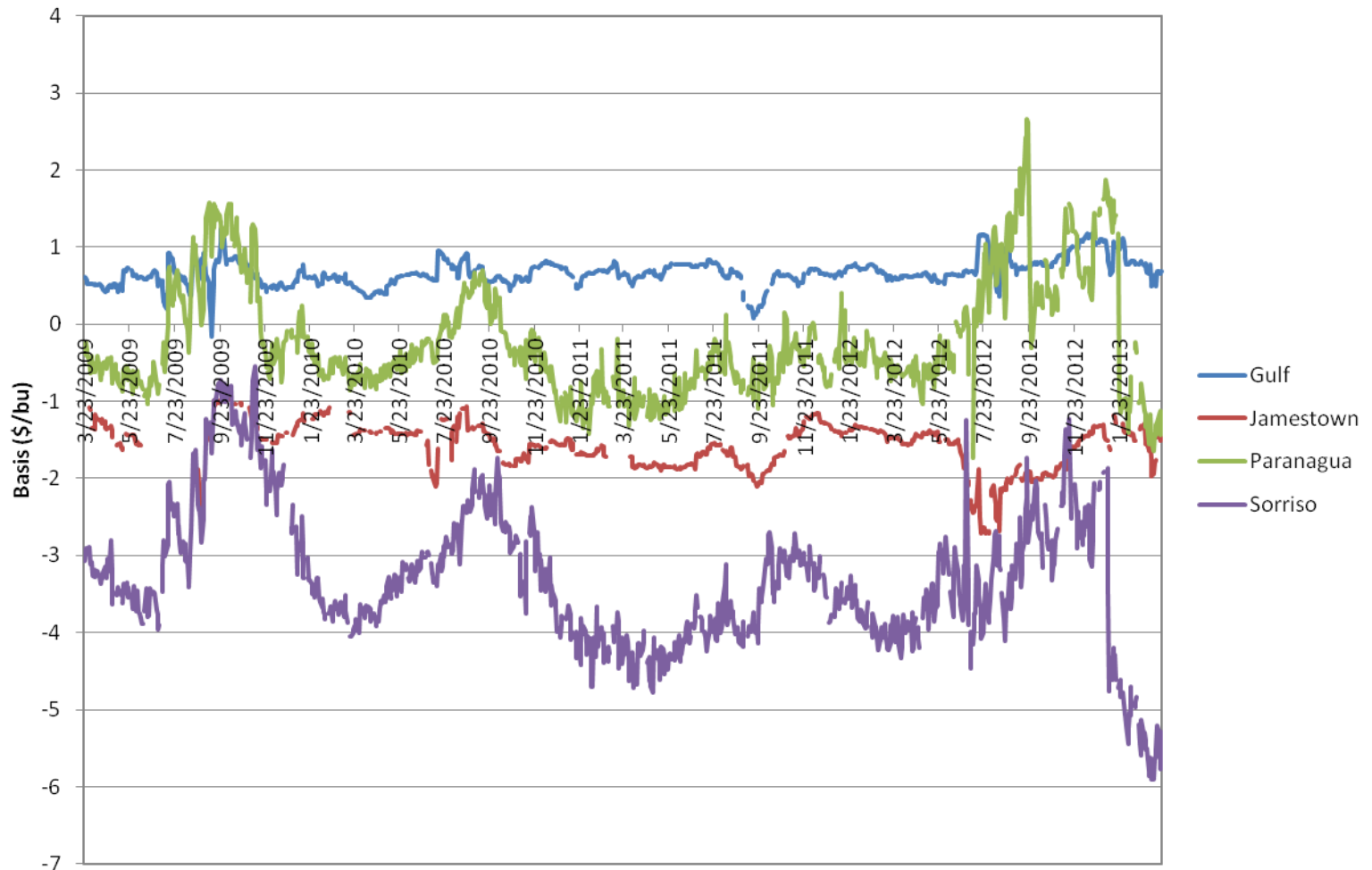
Price Currency Weight Unit Volume Unit

1 Year 3 Years 5 Years Date Range -



3) Price Graph 4) Seasonality 5) Price Distribution

US vs. Brazil Prices (Basis)



Recent Headlines:

- Soy trucks drive to Brazil's southern tip to dodge ship queue
 - Trucks are making a 1,600 km (1,000 mile) detour to avoid Brazil's two most congested ports, instead taking their soy crop to the country's southern tip where wait times for ships are as much as a month shorter
 - Unprecedented long waits due to underinvestment and delays in revamping infrastructure have cost Brazil dearly this year, with its top soy customer, China, reported to have lost patience and cancelled some loads to buy from the United States instead.
- Chinese buyers cancel purchases of Brazilian soybeans again
(04/22/2013)

For the second time within a month, Chinese buyers have decided to cancel the purchases of Brazilian soybeans alleging breach of contract due to shipment delays, according to news at Aproso ...

Summary Points:

- *Price Outlook:*
 - Trends in most markets are turning negative as transition into 2013/14 new crop which is favorable.
 - For now, look for
 - Corn futures to evolve to the 520, range 400-700c/b
 - Wheat Dec to 720, range 500 to 900

Price outlook 2013 for New Crop

	Corn	Wheat
Futures--current	540	730
Futures--outlook	520	720
Gulf basis--current	58	58
Gulf basis--outlook	50	30
Black sea spread		
	\$/mt	
Gulf value \$/mt	224	276
Black Sea Spread	5	-8
Black Sea FOB	229	268

Summary Points: Implications

Exciting times for ag and investment opportunities in Ag

Longer-Term Driven by

- Growth in demand exceeding productivity growth
- Abnormal influence of China in soybean and corn

Geographical Shifts:

- US increase soybeans, corn and shift from small grains
- S. America increase soybeans, and corn
- FSU—more domineering in small grains and non-biotech crops

Game Changers

- **Biotechnology:** Game changer and induce changes in productivity growth rates, and spatial geography of production
- **Logistics.** Investment in infrastructure and efficient operations is critical to efficiently capturing market premiums (without which growers will take discounts and/or traders abnormal risks)
- **Fertilizer:** At least within N. America, there will be greater amounts of lower priced fertilizer in the future, than past
- **Risk/Volatility:** Increase in risk in all markets and marketing functions, and likely sustained. Critical to develop mechanisms for managing risks, without which growers end up absorbing risks and will seek alternatives with lesser risks

Investment in Agriculture: Worldwide---massive investment in agriculture

- broadly defined (farming, handling/trading, technology, logistics, etc.
- Most stable is land; but greater returns, and risk, (more liquidity) in other technology/inputs (fertilizer, seeds and technology, machinery, information technology)

•
Thank you..... **Q&A**

